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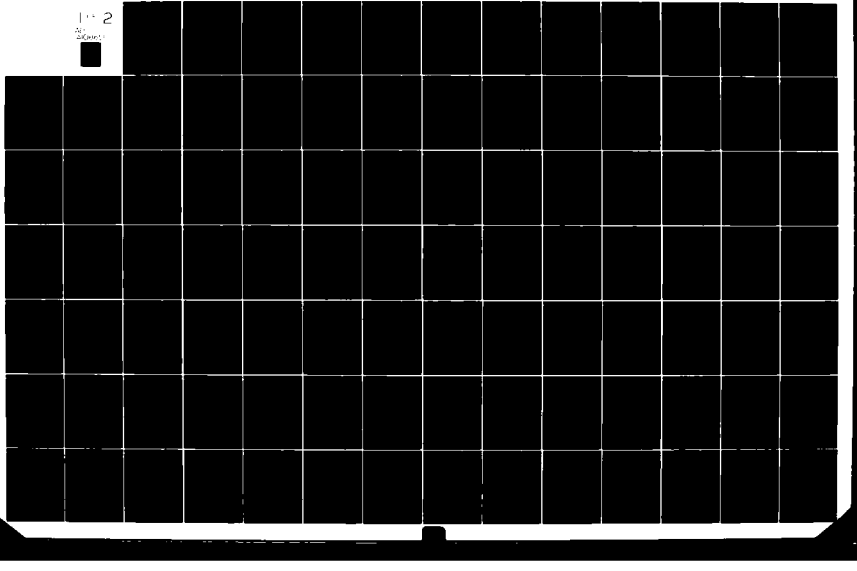

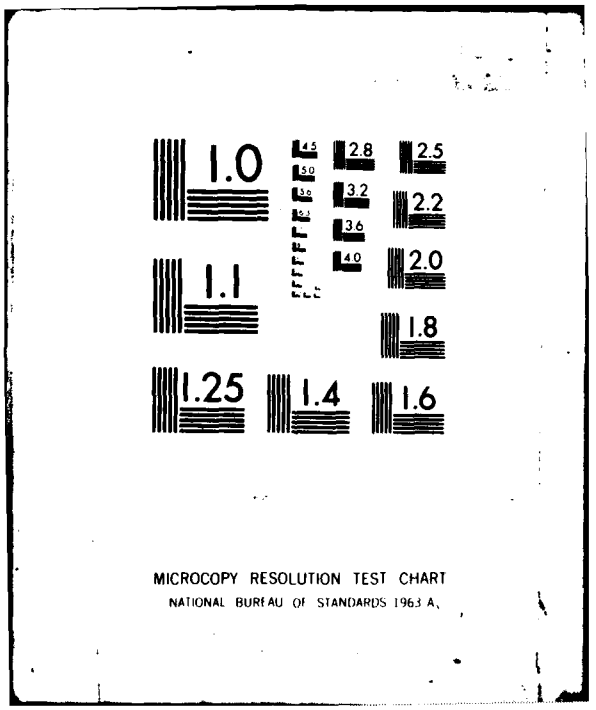
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SALT:
DEEP FORCE LEVEL REDUCTIONS

FINAL REPORT

March 1981

Colin S. Gray
Keith B. Payne

PREPARED FOR THE

SALT/Arms Control Support Group
Office of the Assistant to the
Secretary of Defense (Atomic Energy)
The Pentagon
Washington, D.C. 20301

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This report examines the sense in, and likely feasibility of, deep reductions in SALT III. The analysis stresses the interdependence that there should be between defense planning and arms control. Part I addresses Soviet and American strategic doctrinal issues, while Part 2 deals with the issues of strategic defense, theater nuclear forces, and verification.

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PREFACE

Some Observations on the State of Salt

The research and writing of this report were interdicted by the very sharp deterioration in East-West, and particularly Soviet-American, relations developing from the Soviet invasion of Afghanistan. The authors were caught in a dilemma; they had prepared a near-complete report on SALT III issues, when the President requested that the Senate Foreign Relations Committee not submit the extant SALT II Treaty for floor debate. Clearly the political context for consideration of SALT issues, near and far term, had altered in what could prove to be an enduring way. However, the authors' view of the merits and defects of the SALT process rests upon a long historical view of the character of the Soviet Union as a strategic competitor, and hence was not affected by the events of late 1979 and early 1980. The authors were not educated as to Soviet motives and practices by events bearing upon Afghanistan, since they had long believed that the dynamics of the Soviet Empire would compel that system to expand where opportunity offered.

If anything, and perhaps paradoxically, we believe that this report is more policy-salient today than it would have been had the SALT II ratification process not been arrested by exogenous political considerations. The SALT process, today, is frozen--but, we suspect very strongly that it is frozen solely for reason of political expediency. In our judgment the "mad momentum" of arms control that was carrying the United States from SALT I, to SALT II, to SALT III[1]--with the manifest deficiencies

of each regime leading the U.S. on to the promise of "better" agreements in the future--has usefully been arrested by external interdiction.

By any reasonable Western standards, the SALT process has not "worked"--and certainly has not worked as the U.S. intended. The current hiatus in SALT activity should be used for the reexamination of the SALT record of the 1970s and for the fundamental reconsideraton of the relationship between U.S. strategy and arms control.[2] Afghanistan may have been a deus ex machina for SALT II, but it may yet prove to be a boon to arms control, properly conceived, and to the security of the West.

Hudson completed this report, without seeking to renegotiate its mandate, because it was judged to be the case that many of the views on SALT II and SALT III that were extant in 1979 really had not been altered by the events bearing upon Afghanistan. Views on the desirability of SALT II, and on the merits of deep reductions in a SALT III were undaunted by recent events. Indeed, some senior officials within the Carter Administration, with impeccable logic, argued that arms control is particularly important in a context of deteriorating political relations (the courage of this conviction was not evident in early 1980).

Overall, we believe that SALT II probably is defunct beyond resurrection. However, the support for the SALT process as conducted thus far is still strong--not least in official quarters--hence we judge it useful to complete our original assignment. In fact, we believe that the analysis in this report should be of interest to SALT-watchers of several different persuasions. Although we assume, deliberately, a continuity in the SALT process to SALT III which now seems highly

unlikely, we offer prognoses for what we deem to be a sound SALT III which should hold regardless of the eventual fate of the SALT II Treaty.

Above all else, this report highlights the fact of the near-total dependence of a robust SALT regime upon a sensible U.S. strategic doctrine. At the present time, under the conceptual umbrella of the "countervailing strategy," the United States is groping its way towards the identification of a strategic doctrine that might be adequately supportive of foreign policy interests.[3] However, the strategic debate within the U.S. defense and arms control community remains inadequately composed for the U.S. government to sit down at a SALT negotiating table and be certain that it would not be negotiating in a manner that it might later come to regret.

The present pause in the SALT process should not be approached as though it were only an annoying interruption in the conduct of business as usual. Cogent critiques of the SALT process have been offered from the political left and the political right. Indeed, to an interesting degree the removal of the SALT II Treaty from the category of immediate policy relevance has (at least temporarily) liberated the domestic U.S. debate from the straitjacket of rival advocacy set-pieces that impoverished discussion in 1979. In the present climate, former debating rivals are able to explore the areas that they have in common, as opposed to the exaggeration of the policy elements that separate them.

It was our intention, and it remains our hope, that the analysis in this report will be of value both to those who wish to continue "SALT as before"--once the current international unpleasantness subsides--

and to those who would prefer that the United States take a fresh look at what it is about in arms control.

Footnotes

1. The term "mad momentum" is Richard Burt's. See "A Glass Half Empty," Foreign Policy, No. 36 (Fall 1979), particularly pp.40-42.

2. For somewhat contrasting assessments of the SALT record, see Raymond L. Garthoff, "SALT I: An Evaluation," World Politics, Vol. XXXI, No. 1 (October 1978), pp.1-25; and Thomas W. Wolfe, The SALT Experience (Cambridge, Mass.: Ballinger, 1979). On the strategy/arms control interface, see Richard Burt, "International Security and the Relevance of Arms Control," Daedalus, forthcoming (Fall 1980).

3. See Harold Brown, Department of Defense Annual Report, Fiscal Year 1981 (Washington, D.C.: USGPO, January 29, 1980), pp.65-68.

EXECUTIVE SUMMARY

The analysis in this report suggests strongly that deep reductions in strategic force levels may be neither feasible nor very important. The authors approach SALT III issues from a U.S. strategic perspective; that is to say they are more concerned with the strategic integrity of Western military defenses, than they are with the putative negotiability of a particular SALT III regime.

Part 1 of the report addresses the fundamental issues of strategic doctrine (Soviet and American), of targeting philosophy, and of approaches to SALT that tend, in practice, to set the broad parameters within which particular negotiating options are assessed. Part 2 of the report addresses the issues of strategic defense, of theater-nuclear force, and of verification.

The central argument which pervades all sections of this report is to the effect that a U.S. SALT III negotiating posture, whether or not it seeks to lower SNLVs dramatically, should rest upon a strategic doctrine which speaks to the unique character of U.S. foreign policy commitments, to the known pertinent features of the Soviet adversary, and to the less unique requirements of what may be termed military-political common sense. The authors identify, in detail, a "denial of victory" (or DOV) deterrent strategy which parallels, in some respects, the thinking that emerged in Secretary of Defense Harold Browns' Department of Defense Annual Report, Fiscal Year 1981 (particularly pp.65-68, 85-86). However, the authors go beyond Secretary Brown's reasoning both with resp[illegible] to t[illegible] details of strategic targeting philosophy

(and the structure of SIOP planning), and to the need for a far more even balance between offensive and defensive strategic capabilities. Indeed, probably the most distinctive element in this report (beyond its direct challenge to the leading traditional arguments for deep reductions in strategic force levels) is the attention that it pays to the putative paralyzing implication of a U.S. self-deterrence mechanism that should (logically and prudentially) operate in the context of an undefended American homeland.

Although the authors were given the mandate to study truly deep reductions in strategic force levels, it is their judgment that the negotiable range of most interest would lie betwen 1500 and 1750 SNLVs. In addition, regretfully, the authors judge aggregate payload limitation to be non-negotiable. That judgment is strongly held, but it is not critical to the argument of the report.

At the outset, although acknowledging the political fact of the public record made by the U.S. government in favor of deep reductions, the authors question the inherent merit in the leading arguments usually advanced in their praise. The report is not at all hostile to deep reductions, but it is skeptical about many of the merits typically claimed to pertain to such a severe SALT regime.

In addition, the report invites readers to examine a deep reduction SALT regime in probable Soviet perspective. It is found that most of the benefits expected or desired to flow from deep reductions would not be seen as benefits by the Soviet defense establishment. That judgment would have to be offered even more firmly were the U.S. government to adopt some rough facsimile of the denial of victory strategy suggested

in this report. The U.S.S.R. should hardly be expected to look with favor upon U.S. development of a posture and doctrine designed to defeat Soviet strategy. Indeed, the authors concede the possibility that a SALT III may not be negotiable if the United States were to put its postural/doctrinal house in order and thereby deny the Soviets competitive advantage through SALT. In short, a SALT III that was genuinely the handmaiden of a denial of victory strategy, may have little attraction to Soviet leaders or defense planners.

The authors stress the point that as force levels are reduced, so some potential strategic risks could well become far more ominous. Most obviously, in the context of much lower permitted, on-line, strategic forces, the benefit that might flow from covert weapon deployment and/or from sudden treaty regime "breakout," would have to increase. Similarly, much lower strategic offensive forces--assuming the presence of some meaningful qualitative constraints--would have to increase the potential payoff that might be derived from the deployment of strategic defenses of all kinds. The authors argue that under a deep reduction SALT III regime, the superpowers would be likely to be much more heavily actively defended than is the case at present, and that such a development would probably, on balance, be desirable.

The authors are careful to ground their SALT III analysis both in realistic assessment of the enduring character of Soviet strategic doctrine, and in a consequent determination of the required features of U.S. strategic preparation. The basis of a sound arms control policy has to comprise a clear understanding of the duties laid upon the U.S. strategic force posture: if that is done, then the costs and benefits

of alternative negotiating packages can be assessed. The authors summarize what they judge to be the functions of U.S. strategic forces--ranging from the symbolic upholding of American standing in the world, through the deterrence of arms race challenges, to crisis and actual war-waging missions. In extremis, it is argued, U.S. military power should be capable of extending a not-implausible promise to impose defeat upon the Soviet state. However, such denial of victory, which in most circumstances would be the equivalent of the imposition of defeat, has integrity as a concept only if it embraces a theory and capability for the maximization of the prospects for the survival and recovery of U.S. society.

The authors endorse the unduly neglected argument that the United States, because of its geopolitical situation vis à vis its allies and principal adversary, must be able to take and hold the central war-waging initiative. In that context, reservations are expressed concerning the parameters of official U.S. strategic thinking of recent years. In particular, questions are raised as to the strategic and political integrity of the "essential equivalence" metaphor, and of a strategic targeting review process which continues to neglect to address the basic issue of likely self-deterrence. The authors suggest an approach to strategic planning which should enable the U.S. government both to act with appropriate resolve in time of crisis--yet to do so responsibly and prudently--and to enter a SALT III negotiating enterprise confident in its defense planning assumptions. The U.S. government is urged to capitalize in its strategic planning upon identified and anticipated Soviet political weaknesses.

The report offers considerable detail in support of its argument that a denial of victory strategy, a strategy which makes very substantial provision for the survival and recovery of American society, is the only strategy which constitutes an appropriate competitive response to a very distinctively Soviet adversary that currently is beginning to enjoy the advantages that accrue from some important elements of multi-level military superiority. At some risk of undue repetition, the authors emphasize in detail the dangers that lurk in a world wherein the United States adheres to some variant of the mutual vulnerability theory of deterrence. Unless this is appreciated, there can be little hope of the United States either designing a sound bargaining position in SALT, or behaving prudently in its weapon acquisition policy in the context of a SALT III regime.

The report details some of the postural problems that would attend different SALT III deep level reduction regimes, and offers some candidate solutions, including the provision of suggested weapon inventories. Three postural models are offered--appropriate to SALT III regimes charcterized by SNLV ceilings of 1750, 1500, and 1250.

Part 2 of the report explores the role of strategic defenses; the complications (and opportunities) for SALT planning and negotiating posed both by deep-strike theater-nuclear forces and by NATO-allied "independent" strategic nuclear forces; and the severe verification difficulties that would attend a SALT III deep reduction regime.

In the authors' judgment, the kind of strategic defenses that should be anticipated in the context of a SALT III need not, and should not, pose insuperable problems for the integrity of a U.S. denial of

victory strategy. However, it is recognized that the entry price that might have to be paid in order to gain access to some particularly valuable (in Soviet eyes) target sets could become very high indeed. On balance, the authors believe that the ends of national and international security would be well served by a strategic balance that included heavy active and passive defenses on both sides. The discussion of the roles and implications of a more defense-oriented strategic posture is restricted here to a level adequate to sustain the principal themes of the argument. Nonetheless, it is acknowledged that far longer and more detailed treatment is required of the issue of the proper balance that should be struck between the offense and the defense. Such treatment must be the subject of a separate endeavor; it could not be accommodated in this report.*

The report explores in some detail the probable interface between deep-strike theater, and NATO-allied strategic weapons, and the central-system (principal) focus of SALT. It is recognized that the importance of those so-called "gray area" and allied systems would have to increase, were the superpowers to consider moving to a much lower aggregate level of SNLVs. In the authors' judgment, it has never been sensible for the West to single out "central" systems for separate negotiating treatment, as was done in SALT I and SALT II. However, the difficulties that

*Recent Hudson Institute work on the offense-defense balance includes the following: Colin S. Gray, Ballistic Missile Defense: Policy Issues for the 1980s: Volume III: The Relevance of Ballistic Missile Defense in the 1980s, Draft (Croton-on-Hudson, N.Y.: Hudson Institute, February 1980); Colin S. Gray, Ballistic Missile Defense: A New Debate for a New Decade, HI-3160-P (Croton-on-Hudson, N.Y.: Hudson Institute, April 1980); and Colin S. Gray and Keith Payne, "Victory Is Possible," Foreign Policy, No. 39 (Summer 1980), pp.14-27.

would attend an effort to extend the mandate of SALT so as to include TNF, at this relatively late date, are, admittedly, very formidable. Indeed, it is possible (albeit unlikely) that the U.S.S.R. would resist firmly a serious Western endeavor to equate weapons capable of striking at France or Britain, with NATO weapons capable of striking Soviet soil.

The authors are of the opinion that a deep reduction SALT regime would, at Soviet insistence, have to accommodate Soviet anxieties concerning the treaty circumvention possibility that is inherent in NATO's long-range TNF modernization program. Similarly, it is judged to be close to a certainty that the Soviets, adhering to their long-standing position, would insist upon compensation for the British and French "independent" deterrents. The British are likely to be willing to cooperate with a SALT regime (provided no British force-level draw-down were required--which would be a technical impracticability given a British SSBN force numbering only 4 [and perhaps eventually, 5]boats), but the French are far less likely to be willing to be accommodating.

The encouragement to defensive programs which the authors anticipate to be one consequence of a SALT III regime, would apply as much, if not more, to efforts to counter European theater weapons as to efforts to thwart central systems. Much improved Soviet air defenses, and some ATBM capability, could well pose major problems of penetration survivability for NATO's modernized deep-strike TNF; while Soviet strategic defenses could call into fundamental question the credibility of the relatively small British and French strategic forces.

The authors are particularly concerned that the collateral TNF limitations of a SALT III should not frustrate the prospective success of deep-strike NATO TNF. The report urges NATO to consider seriously the possible benefits of an ATBM capability. ATBM and other defensive programs, however unfashionable at the present time, might be of critical importance to the political integrity of the NATO coalition in a period of acute crisis strain.

Overall, the authors suspect that a SALT III negotiating process could well founder on the military implications of the very different geopolitics of the two blocs. It is not self-evident that British and French strategic forces could be accommodated within a SALT III in ways acceptable to the United States, to the Soviet Union, and to Britain and France. Similarly, it is not at all obvious that negotiations on TNF issues, however they are related to the central system items of the mainstream of SALT discussion, can be fruitful. If the United States were to attempt, as we think it should, to negotiate on the basis of the proposition that NATO comprises a single slate of assets--meaning that an SS-20 targeted against Rotterdam was no less a cause for concern than was an SS-17 targeted against Detroit--the Soviet Union would be asked/required to abandon the position on "strategic" weapons to which it has adhered since the onset of SALT (for negotiating convenience).

Moreover, comprehensive central system/TNF negotiations are not really in the Soviet interest. The SALT process as conducted to date is fundamentally erosive of the extended deterrent capability of the U.S. strategic posture--and hence is erosive of political confidence

within the alliance. Why should the Soviet Union cooperate in designing a SALT III structure which might alleviate greatly those NATO alliance strains that it is in the Soviet interest to increase?

Verification would both be more important vis à vis SALT III than with respect to previous SALT regimes (actual or prospective), and more difficult to effect. Much lower force levels would serve to increase the incentive to cheat (or circumvent: e.g., through missile production and storage [which probably would not be covered by the letter of a treaty]), while new weapon technology deployable in the late 1980s and 1990s could well render detection far more problematical. Whether or not cheating would be judged to be worth the risk clearly must depend upon assessment of risk, estimates of the likely consequences of detection, and prognoses concerning the possible payoff that might flow from successful treaty evasion. Long-standing American views on the amount of evasion required for a strategically significant covert capability, and on the level of risk thereto attached, may be in need of sharp revision were the superpowers to move into a deep reduction SALT III regime. The authors detail these concerns with reference to particular weapon systems relevant to a SALT III period.

While not dismissing the extent to which verification (by NTM) concerns might harm the prospects for a deep-reduction SALT III, the authors believe that many of these concerns would be tolerable were the United States to have moved rigorously towards provision of substantial active and passive defenses. Homeland defense, therefore, is judged to be essential for the credibility of strategic targeting designs; vital as insurance should deterrence fail (or not apply); and could

well provide that necessary measure of confidence as an in-place hedge against the possibility of Soviet non-compliance with, or rapid "breakout" from, the terms of a SALT III Treaty.

1. THEORIES OF DETERRENCE, FORCE POSTURE, AND ARMS CONTROL

1.1 The Salt Process and the Commitment to Reduce

Defense and foreign policy professionals, in and out of uniform, in the United States, NATO-Europe, and the U.S.S.R., know that the SALT process is not a protracted exercise in progressive disarmament. Indeed, the SALT II Treaty debated in 1979 actually licensed a very substantial increase in strategic offensive force levels. This is no criticism of SALT II in particular, or of the SALT process more generally--Western defense analysts have long understood that the goals of arms control, on occasion might best be served by force level increases.[1] Unfortunately, perhaps, professional defense analysts comprise but a very small constituency--with negligible electoral strength. Politically significant constitutencies, at home and abroad, continue to believe that (a) the fewer (nuclear weapons deployed) the better; (b) SALT, at some point, to be worthwhile, has to effect some "real disarmament"; and that (c) there is some positive relationship between force level reductions and the prospects for an enduring peace. All three of these beliefs merit description as persuasive fallacies, but that fact does not detract from their political importance.

To some people, of course, disarmament is a moral, not an analytical, imperative. Such a perspective has no relevance for this report: a strategic nuclear threat reposed in 500, 1,000 or 2,250 strategic nuclear launch vehicles (SNLVs) is a nuclear threat--period. Similarly nuclear, chemical, or conventional force remains force. This seeming excursion is intended to remind readers that much of the high ethical tone adopted

by strong proponents of limited disarmament through SALT reflects nothing more than an emotional appeal. A moral case can be advanced for total disarmament, but not for nuclear disarmament, let alone for limited nuclear disarmament (a sword is a sword--whether it be large or small).

The moral imperative of nuclear disarmament, discerned by some, is alas, perhaps, more than counterbalanced by the moral imperative of protecting friends and allies around the periphery of Eurasia. Should deep cuts in strategic nuclear force levels ever approach a scale such that the super powers could, legally, retain only a minimum deterrent against each other (a condition which this author with the utmost confidence, can assert to be impossible in the world as we know it), then Dr. Kissinger's recent strictures to the effect that the strategic balance has been decoupled from theater security issues, would be close to being a physical as well as a strategic policy truth.[2]

In the context of SALT, the case for force level reductions of different amounts and kinds should strictly be a matter for defense analytical judgment. Politicians will choose negotiation packages which speak most directly to perceived political need, but those packages should have defense analytical integrity. SALT is not about disarmament, though negotiated mutual reductions which would permit a smaller U.S. strategic posture still capabile of fulfilling its foreign-policy supportive tasks, should be of interest.

Lest there be any misunderstanding, these authors acknowledge that the United States is committed, probably irrevocably, to the accomplishment of force level reductions in a SALT III. The "Statement of Principles" accompanying the SALT II Treaty contains a commitment to achieve the

objective of "(1) significant and substantial reductions in the numbers of strategic offensive arms." Aside from this explicit and very official commitment, the Senate hearings record on the SALT II Treaty showed the U.S. Government as being eager to achieve major reductions in the next round. The Administration appears to have judged, probably correctly, that no one of any political importance endorses more strategic offensive arms, in and of themselves. Just as the currently eclipsed SALT II regime was vulnerable to the charge, from left and right, that its reduction/limitation accomplishments were far too modest, so its proponents could rally some support by advertising the argument that the path to a heavily reduction-oriented SALT III had to lie through SALT II--the only treaty negotiable at that time.

Sensibly enough, the U.S. Government did not go on public record with a specific reduction objective to be accomplished through SALT III negotiations. Official language remained at the suggestive, though ambiguous, level of "deep cuts" and "substantial reductions." One can examine really deep-cut SALT regimes; moreover one can specify such regimes with truly severe qualitative constraints. For example, one could resurrect the long-familiar DoD preference for ceilings on the payload of SNLVs. (From a disarmament perspective, no case can be made for a "deep cuts" SALT regime which permits, say, replacement of the SS-11 with the SS-19, or replacement of Minuteman III with the MX ICBM.) Force sizing and capability are very different, though related, matters. The study mandate assigned the authors of this report embraced reduction regimes in the 750-1,250 SNLV range, but these authors wish to record, at the outset, the following policy judgments:

- The lowest negotiable range for an SNLV ceiling for SALT III will most likely be 1,500 - 1,750 (with the latter number as the favorite).

- SNLV payload ceilings will, in the future as in the past, simply be non-negotiable with the Soviet Union.

- Any numerical expectations concerning negotiated outcomes could be upset dramatically by injection of deep-strike theater systems into the SALT III agenda.

The content and manner of presentation of SALT negotiating positions is so heavily influenced by political judgment at the highest level that, by and large, this report will adhere to the defense and foreign policy analytical level of argument. Pressing political considerations that are totally beyond our mandate to consider may dictate (or appear to dictate) a SALT III negotiating strategy which apparently is impervious to defense-analytic concerns. That almost certainly would come to be regretted, but it is possible.

Large questions deliberately submerged in this report pertain both to the real U.S. and NATO-European interest in the continuation of the SALT process as we have known it, and to the likely performance of a SALT II Treaty and protocol regime. The "dominant model" for analysis is a SALT III that is a clear linear descendent of SALTs I and II--though with the major differences of noteworthy force level reductions, the direct negotiating relevance of deep-strike theater systems, and the presence, advocated strongly by these authors, of a serious capability

for the physical protection of the American homeland. In addition, we would be remiss were we to neglect to mention our grave concern over the relationship between the short and the medium to long terms. "Deep reductions in force levels through SALT," the title of our study, is not only an abstract analysis of what may be desirable--of forging better SALT regimes in the future--it also has to embrace our judgment concerning the legacy of the period 1980-85, for the putative SALT III period which might follow. Estimates of what might be negotiable for a SALT III have to be informed by an empathy for past (and apparently enduring) Soviet negotiating practice, or "style." If the United States wishes to negotiate deep reductions in SALT III deliberations, it must understand what is required in order to induce the Soviets to take such propositions seriously. The United States now has an abundance of evidence concerning "the Soviet way" in negotiating SALT.[3] For reasons of size of government, brief passage of personnel in key appointments, lack of orderliness in files, and the highly personal character of some of the "history," there can be no single authoritative reference to the SALT experience thus far. Nonetheless, the authors of this report assume that readers, regardless of their opinion of SALT II, and their aspirations for a SALT III, are attentive to the symmetries and asymmetries in the U.S. (and generally Western) and Soviet approaches to arms control negotiations.

Why is the United States interested in deep cuts in strategic force levels? The answer is by no means self-evident. The following rationales enjoy some popularity--regardless of their inherent merit, or lack thereof:

1. Deep cuts would show real progress towards disarmament and a de-escalation of the arms competition.

Comment: This is unlikely to be true. The fewer the launcher numbers permitted the more likely the two sides would be to attempt to squeeze every ounce of capability potential out of them. The effect of the SALT I Interim Agreement illustrates to some extent the manner in which quantitative limitations can lead to a qualitative fruition. A superficial count of permitted launcher inventories might show a large-scale reduction, but the much reduced force permitted could easily have far more impressive potential than had the numerically larger force that it would have replaced. Similarly, there is a measure of freedom from acute anxiety concerning first-strike vulnerability in numerical proliferation. As inventory numbers decline, each weapon platform becomes more important and (should) attract more concern vis à vis its likely survivability. Therefore, two major pressures inimical to the sense of this particular rationale should parallel a process of deep force-level reduction. First, the technological arms competition should be fueled by the desire to substitute quality for quantity. Second, force reductions of a distinctly non-marginal kind would certainly encourage anxieties over Soviet cheating, breakout, technological breakthrough, and defensive programs.[4]

2. Deep cuts would release defense funds for more "useable" kinds of military power.

Comment: Cuts in strategic force levels would certainly release some defense dollars for other purposes. However, many of the

"overhead" costs of the strategic force posture are not very sensitive to force size.[5] In practice, deep cuts in strategic force levels (or indeed in any kinds of high technology defense end items) ensure a less efficient use of defense dollars because the unit cost of production must rise as the production run is decreased. Moreover, as argued under (1), above, the higher level of anxiety that most likely would attend a much smaller strategic posture, would fuel more expensive R and D programs and particularly could require increased resources devoted to weapons survivability and penetrability. Overall, the strategic forces are not a very promising area to investigate for interesting reductions in defense expenditure; the strategic forces' budget is too modest a fraction of the DoD total (even allowing for the anticipated growth from $10.9 to $19.3 billion over the FYs 1980-84 in FY 1980 dollars). For sizeable dollar reduction, one would have to look to the manpower intensive elements of the military posture.

3. Deep cuts would forward the classic goals of arms control: to reduce the risk of war and to reduce the likely damage that would be suffered were war to occur.

Comment: As phrased this claim lacks any supporting evidence. Close students of the history of arms limitation efforts should have little difficulty understanding that deep cuts in strategic force levels that were not simply superficial (i.e., there was no massive qualitative-improvement compensation for diminishing numbers), would reflect, but not cause, a reduction in the perceived

likelihood of war.[6] If the United States and the Soviet Union could negotiate in SALT III a common limit on offensive-forces payload of, say, four or five million lbs., then there would have been such a revolution in the Soviet approach to its strategic relationship with the United States, that it is doubtful whether a SALT agreement would be needed.[7] As many students of the SALT process have observed, that process registers the facts, actual or confidently predicted, of the real world. Those facts are both political and strategic-technical. The Soviet Union, for reasons that it deems good and sufficient, is convinced that it might, one day, have to wage a central war with the United States. Therefore, sensibly enough, it appears to approach SALT as though SALT could be employed as a useful adjunct to unilateral strategic planning.[8] Truly deep and genuinely balanced reductions in strategic force levels, if achieved, would reflect a Soviet belief that war with the United States was very, very improbable. Looking to the 1980s, and the possible period of a SALT III negotiating process, it is exceedingly unlikely that the political tenor of Soviet-American relations, or the domestic political-ideological evolution of the U.S.S.R., will provide a climate permissive of deep reductions. (The interconnections among the negotiability of deep and balanced cuts, Soviet doctrine, and the Soviet-American political relationship, are so profound that this author is surprised at the apolitical approach to the deep-cut issue for SALT III which permeates almost all public official commentary on the subject.)

Deep cuts in strategic force levels might or might not have a bearing upon the damage that could be suffered in war. One would need to know: (a) what was cut?--launchers, warheads, payload?; (b) how, and in what numbers, would the forces be targeted (and at what heights would the warheads be set to explode)?; and (c) how extensive and capable would be the multi-layer damage-limitation capabilities of the two sides?

Deep cuts, per se, cannot make the world safer. Indeed, the reverse argument, in the plausibly predictable political climate for the late 1980s, could well be the case.

4. Deep cuts in strategic force levels would contribute, politically, to a more stable international order--since they would demonstrate the strength of the super powers' commitment to disarmament.

Comment: The international, and even to a much lesser extent, domestic American appeal of the idea or symbol of disarmament should not be underestimated. In good part, real-world action and inaction are driven by perceptions which reflect appearances, which may or may not have a solid basis in fact. Save with respect to the important issue of nuclear non-proliferation, the Soviet Union has no interest in sharing the disarmament limelight with the United States. In Soviet perspective, disarmament has been an occasionally powerful symbolic instrument for the manipulation of the hopes and fears of sincere people around the world. A little research would inform anyone interested in the facts that the Soviet Union is among the most heavily militarized societies that the world has ever seen, that Marxism-

Leninism is totally antipathetic to the pacifist impulse and is recognized as such by the Soviets, and, overall, that the genuine interest of Soviet leaders in disarmament is confined to the disarmament of the enemies of the Soviet system. The social costs of defense are viewed differently by the Soviet state than they are in Western liberal democratic societies. Soviet appeals for arms reduction can always be counted upon to receive a sympathetic hearing in Western polities--almost no matter how crude the attempt at manipulation. Mr. Brezhnev's démarche of October 6, 1979--wherein he offered to pull up to 20,000 men and 1,000 tanks out of the Group of Soviet Forces in Germany (GSFG), and to talk about possible reductions in Soviet deep-strike theater-nuclear delivery systems, in return for a total freeze on NATO's modernization plan for its deep-strike theater-nuclear forces--is but the latest in a long history of Soviet offers, all of which should be approached in the spirit of caveat emptor.

The benefits for international order that might accrue as a consequence of deep cuts in SALT III, are less than impressive. The claim that the continued absence of real superpower strategic-nuclear disarmament, after ten years of SALT, encourages--indeed almost licenses (given the superpower obligation expressed in Article VI of the NPT of 1968)--nuclear proliferation, is really nonsense (notwithstanding its multiple appearances in State Department prose in praise of SALT II in 1978-79). The complex and sequential decisions to "go nuclear" have so many important

foreign and domestic components, that the passing of judgment on superpower performance in fulfillment of their obligation under the NPT is close to a trivial matter.[9] Given the unique guardianship role vis à vis international order which the United States has assumed, with varying fortune since 1945, international peace and stability--on balance--are enhanced by greater U.S., as opposed to lesser U.S., freedom of foreign policy action. The more credible a U.S. guarantee of military, and ultimately--if need be--military-nuclear assistance, the greater the benefit for international order. The decline over the past decade in the U.S. ability to thwart the foreign policy actions of a major dissatisfied (or revolutionary, in some senses) Power--the U.S.S.R.--has potentially disastrous implications for international peace and stability. In the period 1980-2000, the United States should not attempt to direct the process of modernization in Asia and Africa, but it needs to be able to keep Soviet (and Soviet-proxy) muscular influence out.

This study does not select preferred strategic postures at permitted levels of SNLVs in the range of 750-1,750. Instead, it tends to identify the principles that should guide postural choice, and hence the appropriate SALT III negotiating parameters.

As Robin Ranger has argued, persuasively and at length, there is a profound distinction between technical and political arms control.[10] SALT III, if and when it is consummated, will not (as a judgment) reflect the application of the criteria of technical arms control. In the

West, "technical arms control" refers to an agreement, or set of agreements, which contributes to a (particular-doctrine driven) physical relationship between force postures which is intended to promote a condition of "strategic stability."[11] SALT III, with or without deep cuts in force levels, will be the agreement that proves to be negotiable. Neither SALT I nor SALT II was responsive to American defense analytic anxieties concerning technical stability issues--there is little reason to believe that SALT III could prove to be any better. If SALT III should be an improvement over SALT II, the reason will be that the United States has funded strategic programs of which the Soviets must take serious account.

It is distressing to appreciate that the U.S. Government endorsed a procurement program for ALCMs and a development program (with an identified eventual procurement program) for the MX ICBM before it had settled the pertinent targeting issues. Given the contemporary ambivalence in the strategic targeting community over the feasibility of the likely return from targeting Soviet silo-housed ICBMs, how could one decide upon an MX deployment ceiling of 200 ICBMs? Why not 150 or 300? On the face of it, issues of weapon procurement, of targeting philosophy, and of strategic arms control policy, would appear to be proceeding down very individual paths. In practice, as Henry Kissinger has observed, the U.S. armed services are more procurement, than strategy, oriented organizations.[12] Perhaps even less acceptable than an autarchic arms control policy is a situation wherein arms control processes are an initial determinant of acquisition policy. There is some indication that arms control negotiations may in part actually pace the arms requirements

set forth by the services. For example, General Burke recently observed that:

> The Air Force has not made a recommendation as to force size [concerning the necessary number of CMC aircraft]. Indeed, we have not made a recommendation we ought to build cruise missile carrier aircraft. At the moment we are protecting an option and that is dependent on what emerges in SALT II and the beginning of SALT III and many other factors.[13]

David Mann, Assistant Secretary of the Navy for Research Engineering, and Systems made a similar observation concerning the required number of SLBM tubes as recommended by the Navy.

> At this point, and we have discussed this in some depth and detail with Dr. Perry, we are planning and proceeding but without setting a target number until the MX and the SALT issues are adequately resolved. The navy is just not in a position to try to estimate now how many launchers, for example, they should plan to have by what date.[14]

Clearly, the United States cannot devise a robust SALT III negotiating posture until the Department of Defense can decide upon a targeting philosophy which speaks to U.S. foreign policy interests. Two rather distinctive approaches to strategic procurement programs present themselves. First, the U.S. can ask "what do we need" (to fulfill the tasks agreed to fall to the lot of the strategic forces)? Second, the U.S. can ask "what can we have" (given the many constraints that obtain)? Neither of these "ideal types" is likely, <u>in toto</u>, to approximate political reality. But, the generic recognition of their opposition could have a salutary effect upon SALT III planning. The U.S. defense community should not tire of making, and repeating, the point that the strategic force posture exists--in descending order--to: (a) deter inimical actions; and (b) wage a war, if need be. If the United States and NATO cannot

decide upon a targeting philosophy that is rooted in the dynamic facts of military deployment on the other side, they have no business endorsing "follow-on" SALT negotiations.[15]

With the qualifications that U.S. forward-deployed strike systems, plus British and French strategic forces, should feature usefully in the overall strike plan, these authors would argue that the U.S. negotiating posture for SALT III should be determined, in large part, by the outcome of the extant strategic nuclear targeting review. The serious interest of the U.S. defense community does not lie in the appearances of putative SALT III regimes; instead it lies in the fields of how responsive the permitted strategic posture would be to anticipated Soviet anxieties, and how effective the permitted posture would likely be in action against the Soviet Union.[16]

If the United States is not prepared to reduce severely its foreign policy commitments, or to adjust the basic relationship among its non-nuclear, theater-nuclear and central strategic forces, then SALT III postural options have to be appraised in the light of extant realities. Basically, there are only two choices--though it is worth noting that these choices obtain over a wide range of postural alternatives.

First, one may attempt to design a U.S. strategic nuclear (offensive) force posture which, in and of itself, would discourage Soviet adventure. This option would seek to finesse the self-deterrence problem by denying the Soviets an attractive strategic nuclear target set. In other words, the Soviets might decide that because they cannot wage the counterforce war successfully, they have no sensible military options, and hence they should not wage the war. However, the Soviets might decline to

wage a central war according to rules defined in Cambridge, Mass., or Washington, D.C.[17] Second, transcending the orthodox wisdom of Western strategic academicians, one might decide that the deterrent merit in the strategic offensive forces permitted by a SALT III depends critically upon the damage-limitation promise inherent in war-survival programs. Unpopular though it may be to flag the likely fact, it is plausible to argue that the integrity of any SALT III reduction program will rest very substantially upon the issue of damage-limitation programs. Indeed, to the extent that SALT III actually reduces force levels (as opposed merely to appearing to do so, as in SALT II), to that extent active and passive defenses increase in importance. The U.S. defense community probably would benefit greatly from intense exposure to pertinent historical detail. For example, the Japanese, in late 1941, chose the path of honor over appeasement. Far from being a day of infamy, December 7th, 1941 saw the only intelligent way to initiate hostilities in a war that the Japanese knew they had to lose (if it proceeded beyond the opening rounds).[18]

To repeat, the U.S. strategic nuclear posture should deter attack upon itself, and should be capable of speaking, in action, to the most deep-seated fears of Kremlin bureaucrats. As a general rule, the U.S. defense community should be suspicious of deep-cut SALT regimes, for the reason, above all others, that Soviet weapon production activity is not open to detailed scrutiny as is U.S. weapon production.[19]

SNLV ceilings in the enormous range, 750 - 1,750, though posing complex problems of postural choice, would not change the nature of U.S. strategic nuclear missions: with the somewhat academic qualification

that, barring major benign evolution in the Soviet political system--an almost wholly improbable near-term event--[20] truly massive reductions in SNLV numbers will be either non-negotiable, or (in U.S. and Western perspective) should not prudently be negotiated. The entire ten-year long SALT record demonstrates a quite unambiguous lack of Soviet enthusiasm for force level reductions (even when the Soviets were obliged by agreement to dismantle old ICBM launchers in order to permit postural modernization via an increase in operational SLBM tubes, they appear to have performed as little and as late as the diplomatic traffic would bear).[21] If the Soviet Union were to prove willing to talk with apparent seriousness of a SALT III draw-down from the SALT II permitted SNLV ceiling of 2,250 to anything less than, say, 1,500 vehicles, a heavy measure of skepticism by the U.S. would be sensible. In this extremely unlikely event, while the U.S. should keep an open mind, it should also consider possible malign motives. These could include

- Soviet defense analysis demonstrating that their damage-limitation task was more feasible at lower force levels (even without noteworthy treaty violation on their part).[22]
- Soviet confidence that courtesy of the poor U.S. ability to monitor Soviet weapon production, and the effecive use of telemetric encryption, they could maintain "on line" forces usefully in excess of treaty limits.[23]
- Soviet confidence that the secrecy that surrounds the pace of their strategic missile production, plus covert stockpiling, would give them a treaty "breakout" option that should have real military significance.

- Soviet preparation for rapid augmentation of what Western analysts term Soviet strategic forces, by means of adding a third booster stage to the SS-20 IRBM, and by allocating several hundred Tu-22 M Backfire manned bombers to intercontinental missions (by 1987-88, the Soviet Union could easily have deployed 400 or more Backfires with Long-range Aviation and Naval Aviation).

A much less malign interpretation might be appropriate, were the United States to pursue what to many people would appear to be a radical course in its SALT III negotiating policy. Regardless of the doubts that there should be over the wisdom of very deep cuts in strategic force levels (with most of the doubts pertaining to the various cumulative, inadequacies in and uncertainties of U.S. intelligence), one can in principle design a negotiating scenario wherein the Soviets are given very large incentives to agree to such cuts. Specifically, it is reasonable to expect that the Soviets would prefer at least an appearance of balanced force levels in the 1,000 - 1,250 SNLV range (though only with careful provision made to allow Soviet compensation for British, French, and Chinese strategic forces), rather than a gross imbalance to their disadvantage at very high levels. However, it is difficult to take such a scenario very seriously. It would scarcely be credible to offer the Soviets a stark choce between a genuinely balanced regime at the 1,000 - 1,250 SNLV level (to ignore, for the moment, the third-party complications that should loom larger in significance in superpower analyses as their

own absolute force levels decline), or an unrestricted arms competition that the United States would commit itself to wage and win à l'outrance.

The U.S. defense community has at last come to recognize the enduring alien cast to Soviet doctrine,[24] but it remains far from convinced that measurable advantage can be gained from intense competition--notwithstanding the potential U.S. advantage in high-technology production (even under mobilization conditions, the production line start-up time for strategic weaponry is depressingly lengthy). The Soviets may mirror-image when they assess Western defense intentions, but even allowing for their perceiving an unduly Soviet style United States,[25] they can hardly fail to have been impressed both by the relative slackening of the U.S. strategic competitive effort since the mid-1960s, and by the frequency of official U.S. expression of the idea that a central nuclear war could not be waged for political advantage (let alone "won"). The Soviets, beyond a doubt, do respect U.S. industry, but U.S. defense and foreign policy performance over an extended period of time, would detract, probably fatally, from the credibility of a U.S. threat to effect a strategic-forces mobilization program as the alternative to a SALT III which reflected real arms control.

There would be an unhelpful tension (as opposed to a creative dialectic), in the American/NATO-European political context, between an insistence upon radically deep force level cuts, and the threat of a massive strategic arms build-up. The U.S.'s NATO allies believe that they have benefited greatly from the (eroding) detente condition of the 1970s (embracing the Soviet-American, the distinctively West German-Soviet Ostpolitik , and the pan-European Helsinki) and they

would be less than content, or silent, if a U.S. President attempted the diplomatic dualism of deep cuts or arms race. Moreover, at the practical domestic political level, a President would have to demonstrate that he could deliver on his commitment to a massive strategic build-up, in the event that the Soviets proved to be reluctant to sign-on for his preferred range of SALT III regimes. Building that constituency would have entailed some noteworthy feeding of those American suspicions which tend to complicate the life of an Adminstration seeking domestic support for <u>any</u> SALT agreement, let alone a SALT agreement that would have to accomodate the taking of some substantial risks.

However unpalatable the news may be, the U.S. defense and arms control community should understand, <u>now</u>, that "deep cuts" will likely be neither negotiable nor necessarily desirable in a SALT III. This judgment strikes at both proponents and opponents of the still prospective SALT II Treaty. Recognizing the popularity of the idea of genuine nuclear disarmament, treaty proponents argue that major reductions in a SALT III can come about only if SALT II occurs; while many treaty opponents, of all shades of political opinion, have found it easy to argue that SALT II licenses a strategic build-up (in weapons--as opposed to weapon launchers) to the point that it is virtually an insult to the idea of arms limitation. So, for reasons of domestic political calculation, and (no doubt) genuine attraction--however ill-judged--virtually every well known SALT debater in 1979 endorsed the idea of "deep cuts."

These authors will not argue about the political imperative to endorse "deep cuts," but they will argue that responsible officials, privately at least, should know better. U.S. defense analysts should

not fall into the trap of focussing upon some "magic number" of SNLVs, or of permitted lbs. of payload--what matters is the ability of the United States' strategic forces to accomplish their missions. "Deep cuts" in strategic offensive forces may be undesirable not because the United States should be generically suspicious of disarmament agreements with the U.S.S.R., nor for any ideological reason, but rather because the scale of the strategic balance is irrelevant to the prospects for war and peace, while the unusual impenetrability of Soviet society, married to the enduring character of Soviet strategic culture, has to mean that the risks run by the West are greater at lower, as opposed to higher, strategic force levels. Active and passive Soviet homeland defense measures would be more effective if U.S. strategic forces were reduced in size markedly. An erstwhile modest damage *limiting* capability could assume immodest proportions as the scale of the threat diminished. Soviet civil defense, PVO and ABM assets (the last two probably overlapping considerably) could well be flattered in performance if these were untouched by SALT III constraints,[26] while the U.S. offensive threat was drawn down to a noteworthy degree. Needless to say, under a "deep cut" SALT III regime, the destruction of each Ohio class SSBN, MX complex, and cruise-missile carrying airplane, would comprise a larger fraction of threat neutralized than likely would be the case in a SALT-free world.

Barring a revolution in the U.S. approach to strategic forces' issues, which entailed wholesale adoption of what could be termed a war-fighter's blueprint for the design and operation of the strategic posture, deep cuts in SALT III should simplify the tasks of the targeting

section of the Soviet General Staff: they would have fewer launch vehicles to target, they could "accept" a higher "leakage" percentage (given domestic war-survival programs uncompromised by SALT provisions), and some kinds of active defenses would remain free to grow.

1.2 Arms Control and Strategic Doctrine

The Carter Administration has exhibited a clear preference for deep force level reductions in SALT. Although it has been recognized generally that SALT II would entail no significant force reductions, such reductions were sought in the March 1977 proposal.[27] What was not achievable in SALT II has been declared to be a guiding principle for SALT III negotiations.

Any U.S. position concerning the degree and type of deep force level reductions should be informed by a strategic nuclear doctrine that relates military power to foreign policy goals in a coherent fashion.[28] Strategic doctrine should provide the intellectual framework to guide research and development, acquisition policy, operational planning, nuclear strategy, and subsequently, arms control policy. If American arms control policy is to be determined with any rational relationship to foreign policy needs, it must be related coherently to doctrinal desiderata. Without doctrinal guidelines to determine what is and is not negotiable, an arms control process can easily become the creature of negotiability and perceived domestic political needs.

A sound arms control policy must be a reflection of sound strategic thought. Unless the U.S. has first determined what its targeting philosophy and related force posture should be, based upon what theory of deterrence, there can be no rational assessment of any particular arms control regime or proposal.[29]

That arms control policy should reflect sound doctrine may have been of less momentous concern in earlier SALT negotiations. Because of very high SNLV levels and certain U.S. advantages inherited from

the period of relatively heavy investment in strategic forces (prior to 1965), perhaps little harm might have resulted from modest if unintelligent arms control limitations. To a degree, gross quantity might have compensated for lack of logical integrity in earlier arms control policies. However, in the context of deep force level reductions, limitations divorced from doctrine could well have an unfavorable impact upon the hopefully comfortable fit between strategic doctrine and force posture.

This study addresses the seminal issues and questions that should attend the U.S approach to SALT III deep force level reductions: what targeting philosophy, determined by what theory of deterrence, should inform a U.S. defense community constrained by a severe SALT regime; and, what are the implications of the answers to these questions for the U.S. force posture and acquisition policy?

The approach of the U.S. arms control community to SALT thus far has been determined by the "assured vulnerability" theory of deterrence, and the strategic "doctrine" of mutually assured destruction. SALT has been pursued primarily as a means to enhance stability by ensuring mutual societal vulnerability as the guarantor of mutual deterrence.[30]

However, developments in the Soviet force posture since the early 1970s, and the maturing of American insight into Soviet strategic thought, have convinced many in the U.S. defense community, apparently including the current administration, that the "assured vulnerability" concept should not be the sine qua non of U.S. strategic thought.[31]

Soviet strategic force posture and declaratory policy appear mutually consistent in focusing upon an attempt to take "essential" Soviet societal assets out of hostage status, and to render U.S. strategic forces vulnerable.[32]

The Soviet doctrinal focus is in direct variance to the traditional notions of "stability" that have been the basis of mainstream civilian U.S. strategic thought. A proper U.S. response to this dilemma should be determined before any rational criteria for acceptable deep cuts are established.

The search for a "countervailing strategy" that is relevant to Soviet realities and U.S. interests and alliance commitments currently is in progress. However, there is a large degree of ambiguity concerning the character of the U.S. response to the growing recognition that the Soviet strategic doctrine is inimical to the entire scope of U.S. stability and arms control concepts.[33]

In the context of SALT III deep force level reductions, or an arms control regime of any character, U.S. deterrence concepts should be assessed for their suitability for the promotion of American political objectives in the light of the known character of the strategic "style" of the opponent.

1.3 Soviet Strategic Doctrine and SALT

It is no longer controversial to observe that Soviet strategic doctrine and force posture appear to reflect an intense interest in war-waging, and war-surviving capabilities. Indeed, the Soviet Union does not appear to entertain any semblance of the Western theories of deterrence stability centered upon perpetual societal vulnerability and strategic force invulnerability. Rather, if war should occur, Soviet doctrine envisages a more traditional strategy: to destroy the opponent's war-making capability, survive enemy attacks, and consummate a politically meaningful victory.[34] Based upon available evidence, Soviet military science emphasizes the insuperable benefits of taking the initiative in the event the "imperialists" prepare to "lash out in their death throes." The Soviet target set appears to be heavily, although not exclusively counterforce, and serious active and passive defenses are considered essential.[35]

In short, the Soviet Union gives every indication in its declaratory and acquisition policy of planning for central war with a traditional notion of strategy as its guide. This should not be taken to imply that Soviet leaders desire central war, or take its prospect lightly. Rather the Soviet leadership views the probability of nuclear war to be greater than zero, and prepares to wage, survive, and win such a war if it occurs. Perhaps most alien of all, in Western perspective, is the Soviet intention to do as well as possible in the military conduct of a war--even if the prospect of victory is very distant. According to John Erickson, the key Soviet idea may be that of "useful advantage"

rather than victory[36]--which is not to argue that the Soviets are not receptive to the anticipated pleasures of victory.

An understanding of Soviet stategic thought should be an invaluable tool in U.S. efforts to determine an adequate theory of deterrence. U.S. deterrence concepts should speak to the realities of Soviet thought and planning, and not be limited by skewed perceptions of the opponent. This is particularly important in an arms control process. The inability of SALT to satisfy American anticipations fundamentally has been the product of unrealistic U.S. expectations. Such expectations were engendered by the mistaken assumption that both states shared the same theory of stability, or that the Soviets could be persuaded through SALT to accept U.S. concepts because of their inherent rationality.[37]

However, the SALT process cannot change the Soviet doctrinal orientation. In the context of SALT III (or IV, or V), it is very unlikely that the Soviet Union will alter its strategic precepts. Deep force level reductions, if orchestrated intelligently by the U.S., may alter the Soviet capability to enforce its preferred central war outcome, but not its doctrine or principles of force application. After ten years of SALT the Soviet Union still exhibits no favor for the assured vulnerability concept--at least not for <u>mutual</u> assured vulnerability. Indeed, Soviet force posture improvements expected in the 1980s will be heavily in the areas of active and passive defense.[38] Soviet doctrine does not appear to reflect an interest in deterrence per se; rather, deterrence is viewed as an effect derived from the serious preparation for the primary mission of waging, surviving, and winning war.[39]

In short, the U.S. has been unable to "educate" the Soviet leadership into acceptance of its mutual vulnerability deterrence theory and stability concepts. As the former Chief of the Disarmament Section of the Academy of Sciences in the U.S.S.R. observed recently, the character of Soviet strategic arms is not affected "by the exhortations of foreign diplomats."[40]

There was never a high probability of the SALT inspired doctrinal convergence anticipated by some American analysts. The Soviet Union has not been playing the American game at SALT. The Soviet theory of deterrence (if one can even use the term as such) necessarily entails the rejection of U.S. arms control panaceas that, in deference to an alien concept of stability, would require mutual and cooperative self-restraint to ensure that stability. In addition, Soviet defense planners, for good military and political doctrinal reasons, appear not to be impressed by the Western theory that the advent of nuclear weapons has transformed the character of warfare, rendering it too destructive an experience to have political instrumental value. Rather, in SALT, the Soviets have been about the business of maximizing the feasibility of meeting their own doctrinal requirements. The leitmotiv of Soviet behavior in SALT has been to enhance damage-limiting, war-waging capabilities and to minimize U.S. capabilities to impede those efforts.[41] The Soviet leadership has approached SALT as a tool of defense planning, an adjunct to acquisition policy.

Some analysts have pointed to the ABM Treaty as evidence that the Soviet Union had abandoned its war-survival notions.[42] However, the subsequent continuation, and even increased emphasis on air defense, anti-submarine warfare, and civil defense seem to belie such a hypothesis.

It appears rather more likely that the Soviet Union determined its war-survival objective to be more compatible with an arms control regime which, while inhibiting Soviet ABM deployment, would prohibit U.S. hard-point defense and would, thereby, possibly negate much of the value (perhaps all of the second-strike value) of U.S. MIRV capabilities.[43]

Soviet strategic thought and its particular approach to SALT are probably impervious to significant revision without there being prior major changes in the Soviet political system. Soviet strategic doctrine and the Soviet approach to arms control stem not simply from technological imperatives, but from enduring cultural determinants unique to the Soviet Union. Soviet political culture, its ideologically confirmed conflictual world-view, and the overwhelming role of the professional military in arms control processes are important factors mitigating against a SALT inspired transformation of Soviet doctrine.[44]

In short, the SALT experience has not, and probably never could have, led the Soviet Union away from the war-fighting orientation of its strategic doctrine. The Soviet Union appears to be highly impervious to a doctrinal transformation engendered by alien-inspired concepts of deterrence and stability. Deep force level reductions through SALT III will not entail Soviet abnegation of its approach to strategic nuclear doctrine. If the maturing of Western understanding of Soviet strategic culture, and the lessons of SALT have taught anything, it should be the recognition that a SALT III deep force level reductions regime will not be realized unless the Soviets perceive it as a means of maximizing the feasibility of meeting doctrinal imperatives.

The character of the opponent should in part--though only in part--determine the suitable U.S. theory of deterrence. Thus, the theory of deterrence appropriate for a SALT III regime should address the problem of how to achieve desired deterrent effect with highly constrained forces, in the absence of an opponent intent on a cooperative joint venture in traditional American notions of stability. Indeed, U.S. deterrence theory, and consequently U.S. arms control policy, should reflect the fact that the Soviet Union pursues a strategic doctrine and force posture that directly undermine traditional U.S. efforts to construct a stable strategic balance.

1.4 Posture, Targeting and Arms Control

By and large, the idea of very deep reductions in strategic force levels through SALT is particularly appealing to people who are attentive neither to the details of the strategic posture, nor to the details of the potential operational employment of that posture. The case for deep reductions in SNLVs virtually makes itself if one adheres to a fairly minimal view of the requirements of strategic deterrence.[45] Indeed, given that one can rely upon the Soviets to veto any truly radical mutual reductions, this perspective on deterrence issues leads painlessly to the position of "the fewer the better." There is, of course, no magic number of SNLVs that comprises the perfect deep reduction target. Vital questions include qualitative constraints (e.g., could the U.S.--under, say, a 1,000 SNLV limit, deploy MX ICBMs survivably based, the B-1 or another follow-on manned bomber, and Trident II SLBMs?), and verification provisions (i.e., can we determine, on the spot, that the Soviets do not have an ICBM refire capability?). At relatively low levels of SNLVs (say at 1,000--or less than half the SALT II aggregate ceiling of 2,250 SNLVs), one would have to worry about the possibility of Soviet cheating--to a degree of intensity that would be unreasonable vis à vis the high postural levels permitted by SALT II.

The logical order in defense planning should proceed as follows: deterrence/targeting philosophy ⟹ posture (size and quality) ⟹ arms control policy. It would be absurd to approach SALT III deep reduction concerns via the question, "what kind of a posture should the United States develop, given negotiable SALT constraints X and Y?" Policymaking

following the proper procession cited above has to address, first, the question of what kind and size of a strategic nuclear posture is compatible with the foreign policy duties to be laid upon that posture. There are issues pertaining to what may be termed the "integrity" of strategic nuclear postural matters which transcend the usual boundaries of "strategic" consideration (i.e., so-called gray-area systems, allied and other strategic nuclear forces). Those considerations are very relevant to the SALT III context, and are treated in detail below. However, at this stage of the discussion it is essential that the general functions of the strategic posture be clarified, and that the scope for policy choice be identified. If this is not done, major opportunities for policy innovation may pass unrecognized. The question has to be posed, "what should U.S. strategic nuclear forces be capable of doing?" If reasonably unambiguous answers can be provided, one may then proceed to inquire as to whether some of the tasks identified could (and perhaps should) be performed in other ways, and one may wish to take a second look at the tasks to see whether one or two of them might not lead to extravagantly large force sizing guidance, or to unduly strenuous requirements for technical performance.

It is not the duty of these authors to select a preferred strategic posture for the United States; nonetheless, the following is a defensibly comprehensive list of duties that one would like the strategic posture to be capable of performing:[46]

1. Symbolize the foreign policy roles and responsibilities of the United States.[47]

2. Deter Soviet arms race challenges. (This, of course, is a dynamic requirement bearing upon Soviet estimation of US. political will and of technological-industrial capability. The thesis that the strategic arms competition could be placed in a self-limited mode through deliberate acquiescence in the rival's achievement of a condition of rough parity, and that this novel and (hopefully) more stable condition could be much encouraged through formal arms limitation agreements, has proved to be false. The alternative strategy of convincing the rival that he cannot improve his defense condition through additional effort, merits renewed policymaking attention.)

3. Help deter crises and crisis challenges. Not all crises are acts of God. The United States, on occasion, almost certainly can diminish Soviet enthusiasm for crisis fomentation and exploitation, if the U.S. strategic posture is sufficiently robust (in Soviet eyes) so that the Soviets have no expectation of being able deliberately to escalate in search of an improved political outcome. A sound strategic posture, bereft of major weaknesses, should lend confidence to an American President in his conduct of crisis actions at levels far below that of strategic-force execution. As a general rule, one should not expect a Soviet leadership to initiate a chain of events that it expects will lead to Soviet defeat. Crises of the kind considered here have, for nearly two decades, been very infrequent events

(though, of course, there is no way of knowing what crises the U.S. strategic posture has deterred). Since the protracted Berlin crisis of the late 1950s and very early 1960s (a crisis very substantially encouraged and kept fuelled by an apparent lack of Western resolve), there have only been two occasions where the trail from local events to possible strategic employment was even half-way plausible--over Cuba in October 1962 and during the October War in the Middle East in 1973. Direct, or only slightly indirect, Soviet-American crises have been very rare, but when they occur the political relevance of strategic nuclear forces is obvious to all concerned.[48]

4. Help deter a Soviet (inter alia) military breakout from a crisis. Not all crises can be deterred. In the event of a crisis, an enemy should be deterred from choosing to seek to solve a political problem by military means or, further up the escalation ladder, from seeking an improved outcome through a quest for victory in a wider war.

5. Enable the United States to seize the strategic nuclear initiative, and contain any Soviet response. It is more likely than not that the United States would be compelled to initiate central nuclear employment--although the Soviets, observing an evolving Western military disaster around the periphery of Eurasia might go first in an anticipatory, preemptive mode.[49] Since 1953-54, the United States has

endorsed the idea that the strategic posture could and would compensate for many (often deliberate) shortfalls in locally (forward) deployed defenses.[50] However, the United States could not "go first," responsibly, unless it had a plausible theory concerning the deterring or blunting of a Soviet second strike.[51]

6. In extremis, be able to impose defeat upon the Soviet Union (in terms the Soviets themselves would recognize as defeat). Not infrequently, including in this report, the idea is softened to "victory denial." However, given the known and believed stresses within the Soviet Empire, it is quite probable that "victory denial" in any truly major enterprise (and any sequence of political events that culminated in central strategic nuclear employment would have to be so categorized) would constitute defeat. The U.S. strategic targeting review process of recent years has seen the airing of many opinions concerning both what the Soviets would define as defeat, and the degrees of difficulty that would attend any very serious U.S. attempt to impose such defeat. The concept of defeat, as employed here, should not be thought of in absolute terms. The authors believe that the U.S. defense community should recognize, even more explicitly than is the case today, the idea of defeating Soviet arms, strategy, and hostile ambitions at every level of prospective action

(ranging from the defeat of proxy forces and regimes, all the way up to the coerced demise of the Soviet state).[52]

7. Together with passive defenses at home, be able dramatically to reduce the damage that could be suffered by American society. Conventional wisdom notwithstanding, task (6) above, which most defense professionals endorse today, makes little sense in the absence of a frank recognition of the validity of task (7). Very briefly, the reason is that it could well be the United States that would be pacing a process of nuclear escalation, endeavoring, through measured increases in the levels of applied violence, to persuade the Soviets both to desist from aggression in the theater and to disgorge territorial gains already secured. (It would be well to note that the Soviets, in practice, might choose not to wage a measured, controlled central war--meaning that Western notions of escalation control and intra-war deterrence simply would not apply.)[53] No matter how ferocious the threat that the United States might pose, that threat could and certainly <u>should</u> be little more than a bluff in the absence of U.S. ability to prevent a society-destroying Soviet counterstrike. In short, strategic offensive-force targeting, unless it can produce a truly preclusive disarming effect, lacks integrity as a total approach to the intelligent design of the strategic posture.

A great American geopolitical thinker has written as follows:

> States are always engaged in curbing the force of some other state. The truth of the matter is that states are interested only in a balance which is in their favor. Not an equilibrium, but a generous margin is their objective. There is no real security in being just as strong as a potential enemy; there is security only in being a little stronger. There is no possibility of action if one's strength is fully checked; there is a chance for a positive foreign policy only if there is a margin of force which can be freely used.[54]

Nicholas Spykman's dicta have been out of fashion in the United States since the early 1960s, as the defense community--at least at civilian policymaking levels--came to believe that strategic superiority was a formula for an unending, futile, expensive, and dangerous arms competition. Nuclear weapons, so it was (and is still, very widely) believed, make a mockery of the idea of a "positive foreign policy" based on "a margin of force which can be freely used." None would suggest that a super power would use force, let along nuclear force, against the other super power, "freely" today. However Spykman's reasoning essentially is correct, and is unambiguously correct with regard to motivations behind Soviet military policy over the past two decades.[55]

A heavy focus upon SALT encourages forgetfulness of the relevance of strategy, and the relevance of particular strategic tasks to uniquely American foreign policy requirements. This is not to argue that SALT III, or the SALT process in general, has to be inimical to Western interests. Rather is it to suggest that a sound SALT III will have to rest upon a step-level improvement in U.S. strategic policy deliberation. U.S. strategic forces should not be designed solely so as to

- balance, or to counterbalance, Soviet strategic forces.
- facilitate the negotiation of SALT regimes.

Strategic forces exist in order to fulfill both negative and positive tasks: they do not exist for the purpose of their own limitation. Whatever may be said or written for public relations purposes (or, more often, as a consequence of adherence to an unsound arms control ideology), the United States and its allies should have little interest in there being an "essential equivalence" in the strategic nuclear capabilities of the super powers. A genuine "essential equivalence," if such could be attained--and perceived by all relevant parties--would (or should) mean effective mutual deterrence: neither super power could take the strategic initiative. Such a condition would be a major achievement had the United States been emerging from a period of strategic inferiority. History, of course, tells the reverse tale. For a number of reasons, including defense intellectual failure, the U.S. defense and arms control community has come to believe that "essential equivalence," or "rough parity" (a) is good enough, and (b) is the most that is achievable, or negotiable through SALT. It is commonplace to observe that SALT agreements are negotiable only on the basis of a mutually avowed equality in capability. Longevity and frequency of repetition does not make an opinion true. Almost certainly it is the case that "rough parity," as currently understood, is not good enough for the support of an essentially unchanging list of foreign-policy supportive duties (U.S. commitments have scarcely altered since the late 1940s--what has changed have been the local, and overarching East-West, military [im]balances pertinent to the possible U.S. support of those commitments by forceful action).

Henry Kissinger has acknowledged the trend referred to above.

> Even theorists of arms control who valued maintaining the strategic balance only dimly perceived that the strategic stability they sought implied a strategic revolution. For if attained, it would greatly magnify the danger at levels of violence below that of general nuclear exchange. If crises no longer produced fear of escalation to all-out war, they would also grow more likely. Thus even strategic stability (not to speak of a Soviet edge) would require new major military efforts by us on the regional level or else major political weakness would result.[56]

This very elementary strategic logic was well understood in the mid and late 1950s: only the arms-control and Vietnam-era U.S. defense community (and Kissinger) forgot it. Clearly, the U.S. defense community faces the major challenge of needing to explore possible SALT III frameworks, in conjunction with ancillary (domestic, forward-based, and allied) programs to see if an arms control regime might be designed which would be both negotiable and apposite to U.S. foreign policy needs. At this juncture, and not to preempt analysis offered later in this report, it is plausible to contend that the 1970s approach to SALT and strategic policy design will have (at most) to be abandoned, or (at least) amended radically.[57] Offensive-force balancing, as in SALT II, in the context of revised SIOP planning, simply is inadequate to the needs of Western security. The past and contemporary approaches to SALT and strategic postural design could be deemed adequate only if (a) the United States were urgently in the process of reducing its overseas political commitments, or (b) the United States and its principle allies and friends were in the process of implementing a massive build-up in conventional, theater-nuclear, and naval forces intended to redress the actual or impending imbalances in those categories.[58]

There is everything to be said in favor of a SALT regime which enables the United States to develop a posture adequate for its strategic needs (which are dictated by foreign policy commitments) at less cost and at lower levels of forces than would be required in the absence of SALT. However, questions of cost and force level reduction are as secondary as are the questions of balance, verifiability, and promotion of more arms limitation in the future. The point may be illustrated by the arguments that a particular SALT regime may

- lower force levels.
- save money.
- be genuinely balanced in its effect on the programs of the two sides.
- be adequately verifiable.
- and may promote the cause of more substantial agreements in the future.

None of the above issues speak to the first duty of the defense community--to identify an adequate defense posture and doctrine. There can be no denying the necessity for a fresh appraisal of the strategic concept that underlies Western defense. For more than three decades NATO-Europe has understood that its real security lay in the linkage between the Central Front and the U.S. strategic posture. That linkage had to be eroded given the Soviet approach to arms control, as a result of the bilateral SALT process, and--even more--by the doctrinal-postural trends within the United States after the early 1960s. Through the early and mid 1970s, the United States and its allies essentially could live off the postural and R and D capital that was a bequest from years

past.[59] However, given the relative stagnation in the U.S. strategic force posture prevalent during the 1970s, the erosion of the U.S. extended deterrent will be a certain, and largely self-inflicted dilemma of the 1980s.

The doctrinal basis for SALT I, in dominant U.S. estimation, was an idea so bereft of merit in the unique context of American overseas responsibilities, that its conquest of U.S. policymaking may well be a source of profound puzzlement to future strategic historians. How could a country, which knows that its (and its allies') forces cannot defend the more important forward-located assets in Eurasia without having recourse to central-system use, come to endorse an arms control regime which was touted as registering "the parity principle" for an enhanced stability resting upon the mutual vulnerability of super power societies? Euphemisms may be found but direct comment can only call such an idea foolish and irresponsible.[60]

The inflexibility, indeed plain folly, of assured destruction reasoning was recognized by policymakers early in the Nixon Administration (as it always had been in professional targeting circles--which had allocated only a very modest fraction of U.S. warheads to the urban-industrial assured destruction mission). In his first foreign policy report (1970), President Nixon posed the question:

> Should a President, in the event of a nuclear attack, be left with the single option of ordering the mass destruction of enemy civilians in the face of the certainty that it would be followed by the mass slaughter of Americans?[61]

In his memoirs, Henry Kissinger claims that in his endeavors to provide the President with more strategic employment options than

hitherto--particularly with reference to appropriate responses to "a limited Soviet attack"--"I succeeded only partially." Kissinger proceeds to observe that

> Civilian defense planners were reluctant because more options would require some new forces, complicating budgetary decisions. The service chiefs were reluctant because they prefer to negotiate their force levels by bargaining with each other, rather than submitting them to the tender mercies of civilian analysts who, experience has taught, are more likely to emasculate than to strengthen them.[62]

Sluggish and very imperfect though the process of strategic doctrinal (i.e., NUWEP guidance) revision may have been, it did eventually bring forth a set of major policy recommendations, by and large reflected in NSDM 242 of January 1974 which, by early 1976, found at least some reflection in a substantially new SIOP.[63] However, James Schlesinger, as Secretary of Defense from 1973-75, asserted that targeting changes did not necessarily require major, or even minor, postural alterations,[64] while translation into targeting plans of many of the refinements identified in the targeting review as desirable was not completed prior to the beginning of the Carter Administration.

The targeting review work of the early 1970s was continued under President Carter courtesy of the recommendations of PRM-10 which led to PD-18 (calling for a new targeting review), and ultimately to PD-53, PD-58, and PD-59 approved by President Carter in July 1980. PD-59 apparently stresses the need for counter-military targeting, including hard-target counterforce and counter-power projection; targeting Soviet political control assets, and reflecting a theme of NSDM 242 PD-59 emphasizes the need for great flexibility in force allocation. However, some of the more difficult deterrent/war-fighting questions were not addressed satisfactorily

in the 1977-78 review; the relationships among weapon programs (i.e., "muscle"), targeting, and SALT, continue to evade close attention, and the most fundamental issue of all--how to alleviate the clearly predictable problem of self-deterrence--has scarcely even begun to be addressed seriously. It is probably no exaggeration to claim that the U.S. defense community, in 1980, does not recognize the critical character of the relationship between offense and defense.[65]

The above brief outline, very familiar though it may be, is important for setting the stage for the analysis which follows. The several strategic nuclear targeting reviews conducted in the 1970s have marked so noteworthy an advance on previous thinking that it may seem churlish to offer criticism here. Nonetheless, these authors claim that incremental improvements in postural and target planning, cumulatively impressive though they are, will not be adequate to meet Western security needs through the 1980s and beyond. Although assured destruction has been buried beyond rescue insofar as defense professionals are concerned, its ghosts continue to inhabit policymaking circles.[66]

The U.S. defense community has begun the process of seeking out Soviet vulnerabilities (insofar as possible, as seen in Soviet terms), and exploring ways of exploiting those vulnerabilities.[67] But, full endorsement of the list of tasks for the strategic posture identified above, has yet to be forthcoming. It is unclear, as yet, whether the problem is primarily technical (some of the tasks are incapable of fulfillment with high confidence), political-doctrinal (there are fears concerning probable Soviet responses), or strategic-intellectual (i.e., the proper scope for strategic planning is not fully comprehended).

The most critical issue dividing these authors from what they understand (from the written word and from the strategic posture under development) to be official thinking, is that summarized in task (7) above. Whereas task (6) specifies a requirement to effect denial of victory to/the defeat of the U.S.S.R., at any level of violence, task (7) specifies a requirement for a very substantial ability to limit damage to American society. The policy, and logical, connection between these tasks should be very obvious. Intelligent targeting options vis à vis the U.S.S.R. have to be considered in the context of dynamic campaign analysis. Victory denial strikes lose their charm if the United States cannot devise schemes to prevent a punishing Soviet response. In effect, what the United States has done over the past ten years is to seek "strategy offsets" to the relative decline in Western military strength:[68] at the present time it is not too extreme to argue that the targeting community is looking for ways in which the United States might live with a measure of military inferiority.

Intelligent strategy, in and of itself, is of great value, but the U.S. cannot plan responsibly for SALT III with a near total focus upon possible offensive options. At the present time, notwithstanding the targeting reviews, the deterrence quandry which promoted the precipitate demise of assured destruction thinking has not been resolved. The U.S. does not really alleviate its self-deterrence dilemma by designing far greater "flexibility" into sub-SIOP, targeting schemes. What the U.S. needs is a plausible theory of escalation dominance. Overall, so long as the United States remains in the extended-deterrence business, it needs to think through the problems of war-fighting--and by through

we mean through war aims, their achievement, post-war recovery, and the shape of a desirable post-war world order.

Given the way that the U.S. has permitted the various East-West military balances to evolve since the late 1960s (duly registered, in part, by SALT agreements), credibility--for enhanced deterrence effect (à la Schlesinger 1973-75)[69]--cannot be restored through the prospect of small-scale strike options. THe Soviets would have the means, the incentive, and almost certainly the will, to overmatch any U.S. LNO/RNO or selective attack options. On the basis of the public record, a strategist woud have to judge that the U.S. Government is either bluffing in its NUWEP, or should be bluffing, in that it cannot have thought through its intra-war deterrence problems.

This report does not suggest that there are no alternativs to U.S. development of a truly major damage limitation capability, embracing active and passive defenses in addition to a large prompt counterforce capability, but those alternatives are distinctly inadequate for U.S. needs. A major prudential reason why the U.S. should view damage-limitations as being, in large measure, a non-negotiable set of items in SALT, is the strong possibility that, in the event of a central war, the Soviet military machine might prove to be quite impervious to Western-style ideas of intra-war deterrence.[70] Soviet military science, following Soviet military doctrine, is silent on the subject of limited central war.[71] It should not be assumed that the Soviets, in practice, would lack interest in war-termination short of a definitive military outcome,[72] but the possibility (indeed probability) of that eventuality should

be recognized. Indeed, any close student of Soviet "style" could not recommend anything else.

The U.S. and its allies require that the U.S. be able to limit damage to itself; otherwise the U.S. would be self-deterred from implementing the more punishing strike options devised by its targeting community. In addition, if the Soviets prove to have what amounts to a single war plan for a central conflict, the only practical questions for the United States would likely be: "how well can we wage it?"; and "can we recover?".

Secretary of Defense Harold Brown has referred to the U.S. adopting a "countervailing strategy," which he interprets as meaning that "if they [the Soviets] were to start a course of action which could lead to war, they would be frustrated in their effort to achieve their objective or suffer so much damage that they would gain nothing by their action."[73] That is a healthy thought, but it neglects the most probable political-military circumstance of relevance--one wherein it would be the United States which was motivated to lead the process of escalation. All of the levels of escalation which Western defense professionals like to imagine are, unfortunately, umbilically interconnected. If there is some topmost threshold beyond which lies at least 100 million dead, there is no effective deterrence stand-off. In the context of such a horrendous level of casualities, there would be little consolation in the fact that the U.S. could make the Soviet Union "suffer so much damage they they would gain nothing by their action." An adequate targeting doctrine, and implementing strategic posture, cannot embrace an option range which leads to an unacceptable final choice. The U.S.

targe g community has to be very careful lest it fail to appreciate that, notwithstanding the political insights it has achieved over the past several years, it might be embracing what amounts to assured destruction and self-deterrence "on the installment plan."

The most critical questions are:

- What threats do the Soviets find most deterring?
- Should war occur (and one can imagine not totally implausible circumstances wherein the Soviets would be "beyond deterrence"), what would it actually be in the U.S. interest to do (i.e., what should be the character of our operational strategy)?
- And, how do we accord ourselves the freedom of action needed first to initiate and then to carry through a central nuclear campaign--to whatever level of violence is required to deny victory to the Soviets (i.e., how do we protect American Society)?

Underpinning U.S. policy on SALT III should be--in this order--a deterrence theory, informing a targeting doctrine, driving the strategic force posture. An intelligent targeting doctrine should work synergistically with a robustly configured posture. The U.S. should plan not only to implement its war-waging objectives, but also to disrupt those of the adversary. The single most important component of the US. strategic posture should be an ICBM force that the Soviets could not attack sucessfully. Figuratively speaking, a survivably deployed MX force should function as an escalation firebreak.[74] A major argument for MX, though one which is advanced too little, is that its very existence poses a planning nightmare for the targeteers on the Soviet General Staff. In the context

of a U.S. strategic targeting doctrine that spoke very directly to known Soviet anxieties (e.g., that emphasized military and political-administrative target sets), even in the absence of noteworthy U.S. active and passive defenses, the mere existence of MX could well be a deterrence restorer.

The synergism of posture and targeting philosophy is very important. The Soviets must face an impossible hard-target counterforce task, and the prospect of suffering intolerable damage to the essential assets of their state in good part as a consequence of their counterforce incompetence. Leaving aside some important technical issues regarding likely efficiency in implementation, the U.S. targeting community appears to have reached a rough consensus on the judgement that "the ultimate penalty" that the Soviets could be compelled to pay, in their own terms, would be the enforced demise of their political system (in deterrent terms, this should be thought of as constituting the functional equivalent of massive population and industrial damage in U.S. perspective). The Soviets, with good reason, might well believe that the United States would be self-deterred from implementing any grossly unpleasant strike options vis à vis Soviet ability to control Soviet territory, by way of an initiative. But, if the U.S. strategic force posture is substantially immune to Soviet counterforce attention, then Soviet central strike options either in response to very limited U.S. (or NATO) central employment, or in a preemptive mode, would be greatly narrowed.

The Soviets could, of course, attack U.S. projection forces and C^3 nodes, but they would have been denied the ability to limit damage (which should prove fatal--if U.S. targeting information and strategic

weapon performance are adequate) to their homeland through a militarily intelligent strike plan. Moreover, the deterrent equation should have been turned around to the U.S. (and U.S.-allied) advantage, because the burden of an escalation decision would be on the Soviet Union. Soviet leaders might well believe that were they to respond to a small U.S. central strike with a very large attack on U.S. industry and C^3 facilities, the U.S. NCA, reasoning that it had little left to lose, would begin to implement the massive counter-military and counter-political control strike options that had been advertised.

Unfortunately, events might not proceed as favorably as suggested immediately above. First, the Soviets might be sufficiently desperate (or rigid, possibly) that they would "do their military duty" and launch a massive central counterforce attack, even though their defense analysts predicted only modest (or less) success as a result. Second, if truly deprived of strategic force targets worth assaulting, the Soviets might attack other military targets (including C^3), including some war-supporting, and recovery-relevant, industry--reasoning that the United States would still have a great deal left to lose. Third, the Soviets might choose to punish U.S. allies for damage wrought by limited U.S. strategic strikes (in the context of an evolving Soviet theater victory)--with a view both to the unraveling of such alliance cohesion as remained, and to the coercion of the United States.[75]

In short, an invulnerable ICBM force, while a necessary component of an adequate force posture, offers no guarantee that the U.S. could restore deterrence at tolerable cost through limited central nuclear employment. Even though it is very difficult to imagine the Soviets

choosing to go to central war, or to respond more than minimally to U.S./NATO LNOs or RNOs, in the face of a survivable and (known [in Moscow] to be) intelligently targeted MX ICBM force, these authors could be wrong. The MX, and indeed any other offensive weapon, singly or in combination, cannot substitute for the active and passive defense of North America. However, if the U.S. political system continues to decline to invest in active and passive defenses, then the case for an escalation firebreak, comprising strategic forces that are survivable and can target the most cherished assets of the Soviet state, is even stronger. A prudent United States would recognize the stabilizing potential of damge-limitation.

In the context of postural firebreaks, it could be dangerous to consider an MX deployment mode as adequate even if it compels "total commitment of the Soviets' ICBM force."[76] Dr. Perry's formulation is sound from the narrow point of view of defense analysis, in that it would surely be irrational for the Soviets to choose to exchange roughly three-quarters of their offensive-force payload in return for less than a third of that of the United States. But, it would be unwise to offer the Soviets the possibility of such a Pyrrhic victory--they might take it. Moreover, one has to ask what damage would have been inflicted on the remainder of the U.S. strategic force posture? Perhaps above all else, it is unwise to plan to win an ICBM exchange <u>at home</u>.

1.5 Assured Vulnerability: An Inadequate Theory of Deterrence

The tendency in the U.S. with respect to SALT and strategic force procurement in general has been to assess deterrence efficacy in deference to the mutual vulnerability theory.[77] However, the capability to destroy societal assets in initial or retaliatory strikes is far from a suitable standard for U.S. deterrence desiderata, particularly in the context of any anticipated SALT III deep force level reductions.

The hypothesis that U.S. deterrent requirements can be accommodated by threatening some variant of urban/industrial punishment logically is vulnerable to a variety of well-known critiques.[78] A fundamental incongruity exists between a deterrent threat of punitive "catastrophic damage" and U.S. deterrence requirements.

U.S. strategic nuclear forces are expected to provide a deterrent function across the spectrum of threat. Yet, in all probability, nothing short of an unlimited attack on CONUS could provoke a heavily U/I targeted response.[79] The existence of the Soviet counterstrike threat should dampen any enthusiasm for actually executing such an U/I strike, thereby "deterring our deterrent." A seemingly insoluble dilemma is engendered in any attempt to match assured vulnerability logic to U.S. deterrent needs: how is it possible to provide a credible deterrent against a variety of limited threats, including attecks on U.S. allies, with a threat that cannot rationally be operationalized in response to those threats? An effective deterrent should threaten the Soviet Union with unacceptable consequences as an ultimate sanction should it choose to engage in competitive nuclear escalation. However, if executed, an employment policy designed to destroy what the Soviets "really"

value, whether it be population, industry and/or political control, would leave few incentives for Soviet retaliatory restraint. The enduring American notion of denying the possibility of "victory" to the Soviet Union (on its own terms) through punitive offensive operations does not suggest why such a threat would not be self-deterred in almost any (and probably the least unlikely) circumstances. If U.S. strategic forces are expected to provide a deterrent across the spectrum of threat, then the U.S. theory of deterrence must include in its calculus the opponent's possible counteractions and the willingness of the American leadership to accept the consequences of such counteractions.[80]

It may be true that the unknowns surrounding central strategic war would render quite uncertain Soviet anticipation of U.S. self-deterrence subsequent to a limited attack. One would suspect that the U.S. threat of "catastrophic retaliation" to Soviet attack appears larger than life to Soviet political leaders. If so, an assured destruction deterrence theory should provide a prewar deterrent of more integrity than the critics anticipate. However, the U.S. deterrent must be effective in politically benign periods and during acute crises. During a crisis wherein the Soviet Union perceived itself to be "cornered", it could be near impossible to deter the Soviet Union and the dilemma of American self-deterrence would become more obvious and significant.[81] The U.S. deterrence theory and related force posture rather than virtually inviting Soviet leaders during a crisis to consider the exploitation of U.S. self-deterrence, should foreclose such considerations by the Soviets to the extent feasible.

A focus on mutual vulnerability, and a commitment on behalf of distant allies to lead and dominate a process of competitive escalation are logically incompatible. The credibility of America's extended deterrent would seem to be a function of the American interest in actually carrying out the deterrent threat. As has been observed, in the context of wholesale American vulnerability, if the U.S. must engage in competitive nuclear escalation even holding at risk what the Soviets "really" value is more a guarantee of self-deterrence than deterrence.

In addition, no deterrence machination can reduce the probability of war to negligible proportions. Indeed, we can never be certain of the reality or efficacy of deterrence whatsoever. Mutual vulnerability theory provides no acceptable guidance precisely when it would be needed most, at the moment deterrence fails. The U.S. theory of deterrence must be complementary to an operationally acceptable war plan. The notion that deterrence efficacy can be divorced from operational realities is neither rational nor is it reflected in Soviet strategic thought--and it is after all, Soviet minds the U.S. deterrence posture must impress.

1.6 Assured Destruction and SALT III

Salt III deep force level reductions cannot establish logical integrity for mutual vulnerability deterrence theory. Indeed, as force levels become increasingly limited, mutual vulnerability inspired doctrines such as MAD are likely to retain ever less credibility. Current Soviet active and passive defenses call into question a continuing U.S. capability to execute an assured destruction type retaliatory strike with extant force levels.[82] With the obvious exception of BMD, active and passive defenses have not been negotiable items at SALT, and the Soviet Union in particular has invested heavily in such damage-limiting programs. Unless extraordinary efforts were made to ensure the integrity of the U.S. assured destruction threat, deep force level reduction would have to increase the significance of Soviet active and passive defenses.

If deep force level reductions greatly reduce the number of warheads superfluous to an assured destruction mission, fewer sub-SIOP targeting options would be feasible (or, at least, advisable). Consequently, the targeting flexibility recognized as necessary (but insufficient) to help redress the self-deterrence dilemma would likely be impractical. The U.S. could be severely constrained in its ability to incorporate LNOs or higher level flexibility into its strategic nuclear weapon employment policy.

Whether or not an U/I assured destruction type threat would indeed be possible under a SALT III deep force level reduction regime actually is an irrelevant question per se, since such a threat is not suitable for U.S. deterrent needs. U.S. strategic advantages formerly made less conspicuous the incongruity between deterrence desiderata and

mutual vulnerability theory. However, the conditions that currently render mutual vulnerability obviously inappropriate for the U.S. will exist during the tenure of any feasible SALT III regime.

- The U.S.-Soviet political conflict will remain, and central war will be a non-negligible possibility. Thus, U.S. strategic doctrine should provide rational, non-suicidal guidance in the event that deterrence should fail.
- The threat of assured destruction will still be incredible vis à vis any threat other than an unconstrained attack on CONUS. Whether a limited Soviet strategic strike would make any military sense would depend upon the degree of then-extant U.S. societal and strategic force vulnerability. The Soviet Union should be able to increase its throwweight advantage by a limited attack at least until the very late 1980s.
- Because of the enduring cultural determinants of Soviet strategic doctrine, the Soviet Union will not cooperate in American notions of stability by purposefully perpetuating its own societal vulnerability. U.S. ideas of pre- and intra-war deterrence thus could be lost upon the Soviet Union, compelling the U.S. to wage central war to a military decision should deterrence fail.
- U.S. strategic nuclear forces will have extended deterrence responsibilities. The U.S. will still need a theoretically sound capability for escalation dominance so long as Warsaw Pact forces are capable of forcing the United States into

the dilemma of strategic nuclear escalation or conciliation in the theater.

This protracted discussion of the current and continuing incompatibility of mutual vulnerability theory and U.S. deterrence requirements has been pursued because MAD, and MAD-plus-flexibility variants have been, and remain superficially attractive concepts. President Carter's assertion in his 1979 State of the Union Address to the effect that one Poseidon SSBN constitutes an effective U.S. deterrent seems to reflect an official approach to strategic doctrine based, at root, upon a minimum variant of mutual vulnerability deterrence theory.[83] Such a concept of deterrence adequacy could justify virtually any deep force level reductions regardless of how inappropriate for U.S. requirements. It is not difficult to imagine arguments based upon such a mutual vulnerability theory of deterrence, to the effect that any force level reduction permitting the U.S. 200-400 one-megaton equivalents (OME) would be acceptable.[84]

There is a fundamental distinction between a deterrence theory and related strategic doctrine based upon the concept of mutual societal punishment, and a theory that focuses upon the deterrent effect of threatening military applications of strategic nuclear forces in a fashion coherently related to political purposes, (i.e., a strategy). Despite a general lack of support from the defense community, and its plain inability to address U.S. deterrent needs, it appears quite possible that some variant of MAD and mutual vulnerability theory could be the negotiating framework for SALT III. The mistaken assumption that inspires

mutual vulnerability logic, that there can be no distinction between victory or defeat in a central war, is still evidently a basic strategic reference point of the Carter Administration.[85] Such an assumption obviously promotes an unacceptable distinction between the goals of deterrence and war-survival, and inhibits serious non-suicidal consideration of how the U.S. should behave during a central war.

The U.S. theoretical approach to SALT has been based upon the mutual vulnerability model of minimizing arms race and strategic instability. However, such an approach will be less feasible in SALT III. A deep force level reduction regime would render a MAD-type deterrent relationship less realistic as the basis of strategic stability for reasons beyond its logical inadequacy to meet U.S. requirements and address Soviet realities. As force levels become increasingly restricted and target coverage consequently is limited, the U.S. could be less capable of retaliating effectively against the wide-ranging targets necessary to inflict the very high levels of military, industrial (and collateral population), and political/military control, destruction still envisaged by some as synonymous with "catastrophic retaliation."[86]

Unless accompanied by a major U.S. commitment to enhance strategic nuclear force survivability, an arms control regime entailing deep reductions in SNLVs, without a parallel severe limit on Soviet (and U.S.) active defenses, offensive warhead numbers and/or throwweight, would greatly constrain U.S. retaliatory target coverage. Under such an arms control regime, the side initiating central war could attain an extremely favorable cost-exchange ratio. It could become more difficult

to include military selective attack options in U.S. targeting plans and hold a survivable assured destruction capability in reserve.

Unless the U.S. is prepared to pursue seriously strategic force survivability, and/or unless the proposed deep force level reductions include restrictions on damage-limiting and counterforce capabilities, the U.S. would probably have an increasingly difficult time maintaining a posture capable of assured destruction and sub-SIOP targeting flexibility. Given the Soviet doctrinal predilection for war-fighting and surviving capabilities, it is implausible that the Soviet Union would agree to serious limitations in those areas. Such an agreement would reflect Soviet acceptance of Western deterrence precepts that Soviet leaders, after ten years of SALT, have shown no willingness to accept, and would be inconsistent with a decade of Soviet strategic force deployments and expected Soviet deployments through the 1980s.

In short, an assured destruction type model of deterrence, even when complemented with LNOs, not only cannot adequately address current or foreseeable U.S. deterrence requirements, it could be difficult for the U.S. to maintain the requisite force posture under a plausible SALT III deep force level reduction regime.

1.7 A U.S. Theory of Deterrence

A theory of deterrence relevant to U.S. requirements and suitable as the touchstone for SALT III should provide a logical intellectual framework for determing how the U.S. strategic nuclear force posture can:

- minimize the possibility of Soviet limited or unconstrained attack on CONUS.
- allow the U.S. President to discipline Soviet behavior during a central war through intra-war deterrence in the event prewar deterrence fails.
- provide the U.S. president with escalation dominance and an effective firebreak against Soviet escalation in a local conflict.
- deter a Soviet military breakout from acute political crisis.
- minimize Soviet incentives to issue arms race challenges, i.e., provide arms race stability.

A U.S. theory of deterrence must also address the question of how the goals of pre- and intra-war deterrence can have a symbiotic relationship with a theory of war-survival. There is no inherent persuasive reason why the goals of deterrence and war-survival should be considered as incompatible, indeed, preparation for the latter logically should establish the integrity of pre- and intra-war deterrence by circumventing the self-deterrence dilemma. If a theory of deterrence is incompatible

with the goal of war-survival, it is inappropriate as the basis for U.S. planning and is based upon a dangerously narrow conceptual framework.

In attempting to construct a theory of deterrence appropriate for U.S. requirements, and hence SALT III negotiations, two seminal questions must be addressed: given the maturing of U.S. understanding of Soviet doctrine, what should induce the Soviet leadership, even under acute crisis circumstances, to avoid taking or continuing those actions the U.S. wishes to deter?; and, if deterrence should fail, how might U.S. strategic nuclear forces be used to maximize the probability of an acceptable war outcome? To provide mutual integrity and consistent guidance for U.S. acquisition policy and arms control negotiations, the American deterrent threat should serve as the basis for a strategic nuclear weapons employment policy suitable for U.S. war-survival.

Fortunately, it is possible to conceive of a theory of deterrence compatible with SALT III deep force level reductions, that has logical consistency vis à vis the entire spectrum of threat, and correspondingly could inform a coherent operational strategy if pre-war deterrence failed. Indeed, in SALT III the U.S. could be in the novel position of pursuing an arms control policy that is consistent with an adequate theory of deterrence. Such an optimal theory of deterrence would be unrelated to the mutually assured destruction concept of retaliation against an U/I target set. Rather, the Soviet Union would always have to include in its decisionmaking calculus a serious anticipation that the U.S. could initiate central war and dominate any subsequent process of competitve escalation. This is hardly a new deterrence concept. The essential characteristic of Herman Kahn's Type-2 deterrence was

a credible threat to initiate central war,[87] and an essential declared precept of the "Schlesinger Doctrine" was an attempt to enhance the credibility of the U.S. deterrent through the provision of limited first-use nuclear options.

However, despite American declaratory policy, and perhaps reflecting the lingering influence of assured vulnerability thought, the U.S. has not acquired a force posture that reflects a serious commitment to first-use and escalation dominance (at least, not in U.S. perspective). A logical observation by Herman Kahn almost two decades ago is still instructive: "...as far as the Soviets are concerned, the probability of such an attack [a first-strike] by us is small particularly because we have made negligible preparations to ward off, survive and recover from even a 'small' Soviet retaliatory strike."[88] A deterrent that provides the U.S. a measure of escalation dominance must accomodate a theory of war-survival.

A deterrent centered upon the declared threat of initiating central war, and denying the Soviet Union a "theory of victory" at any subsequent level of conflict if prewar deterrence fails should meet U.S. deterrence needs. The optimal victory denial deterrent would be unrelated to the threat of "catastrophic retaliaton." Rather, the U.S. deterrent threat, force posture, and nuclear weapons employment policy would be structured to defeat Soviet arms at any level of central war.

Immediate goals in the Soviet theory of victory are:

- destruction of the U.S. capability to organize a counterstrike.
- achievement of a preponderance of residual nuclear power.

- if necessary, the destruction of the total military-economic potential of the U.S.
- the seizure of critical strategic assets.[89]

A denial of victory (DOV) theory of deterrence would be based upon a U.S. threat and capability, at whatever level of central war circumstances dictate, to force the Soviet Union into the dilemma of choosing between escalation as a means of attaining political objectives, or conciliation; and to deny the Soviet Union any possible anticipation of attaining victory through escalation. Superficially, at least, this argument parallels that advanced by Secretary of Defense Harold Brown. Dr. Brown has written as follows:

> ...we must have forces and plans for the use of our strategic nuclear forces such that in considering aggression against our interests, an adversary would recognize that no plausible outcome would represent a success--on any rational definition of success. The prospect of such a failure would then deter an adversary's attack on the United States or on vital interests.[90]

Where the authors part company with Dr. Brown is in <u>their</u> insistence that a "countervailing strategy" must lack integrity in the absence of a very substantial U.S. damage limitation capability.

An American threat to deny victory to the Soviet Union should be an effective prewar deterrent. If prewar deterrence fails and circumstances allow the possibility of intra-war deterrence, it could also serve as a blatant foreshadow of more grevious things to come should the Soviet Union persist in pursuing hostilities. As a foreshadow of "things to come" a denial of victory deterrent should leave no doubt in the minds of Soviet leaders that they could not gain a more advantageous position through escalation, and <u>in extremis</u> the U.S., with its unparalleled

military production potential, would be capable, politically and militarily, of overwhelming the Soviet state in the postwar world.

The initial target set entailed by a DOV theory of deterrence would be heavily counterforce, and constrained by a conscious effort to avoid gratuitous collateral damage. To dominate an escalation process by foreclosing upon a Soviet theory of victory the U.S. would have to be capable of denying the Soviet Union any preponderance of postattack or postwar residual nuclear power. Discrete targeting, where feasible, should allow the possibility of coerced restraint in Soviet counterstrikes.

The essential assumption of a DOV theory of deterrence is to the effect that such a threat should be extremely deterring to Soviet, qua Soviet, leaders. Soviet strategic nuclear doctrine appears to reflect little of the sophisticated political bargaining and escalation concepts that dominate Western thought.[91] Rather, nuclear weapons are deemed by Soviet military science to be instruments of military expediency. The purpose of nuclear use would be to expedite a military solution to a military problem. As such, the threat of victory denial should provide a deterrent that addresses Soviet incentives for nuclear use. The ascendency of military science at the point of transition to a military solution should validate the fundamental assumption of a DOV theory: the Soviet Union would be disinclined to enter into a central war devoid of any prospect for victory, or progress towards its superordinate political goals.

In an acute crisis, perceived by Soviet leaders as involving interests critical to the stability of their regime, a U.S. threat of victory-denial should be both more fearsome and much more credible than a threat

of catastrophic (largely) U/I retaliaton. The Soviet Union prepares psychologically and physically for the type of attack envisaged in threats of catastrophic retaliation. This is not to imply that Soviet leaders hold a cavalier attitude toward the prospect of central war. Rather, if the Soviet Union perceives itself as being forced by political conditions to wage central war, Soviet military science calls for the defeat of the enemy; as such, huge population and industrial losses may be anticipated and considered not-intolerable, if the political objective is thought to be obtainable. If Soviet leaders consider central war to be an event that would be forced upon them under extreme circumstances, (as conservative planners) they would have to assume the inevitability of huge losses regardless of their behavior. It should be recalled that the CPSU and Soviet state have previously survived an incredible degree of externally and self-inflicted population and economic loss. The current Soviet leadership experienced the extreme urban/industrial (and agricultural) destruction of Operation Barbarossa, maintained the Soviet military organization, and thereby achieved its political objectives. In short, within living memory the Soviets have experienced massive devastation preceding victory. Rather than threatening a punitive attack for which Soviet leaders prepare (and concerning which their unwillingness to accept under every condition is far from certain), a U.S. DOV deterrent would threaten to defeat Soviet strategy.

A significant corollary of victory-denial that should speak particularly to Soviet fears is the probable uncertainty of Soviet leaders concerning the capacity of the Soviet domestic and extended political system to withstand the strains of wagirg an unwinnable war of unparalleled

destruction. Probably it is safe to assume that the Soviet coercive political control of its holdings is recognized to be far more vulnerable to the dislocations of war than is the American political structure. A DOV deterrent should effectively exploit that vulnerability. The threat and underlying capability to deny victory to the Soviet Union should promote and render unambiguous a latent threat of effecting the devolution of the Soviet state and of its authority in Eastern Europe. This significant Soviet vulnerability should be exploitable by a DOV deterrent across the spectrum of threat: even in limited conflicts it should add considerable realism to the threat of "more grievous things to come." Such a deterrent should become increasingly threatening at increasingly higher levels of conflict. As such, the threat of victory-denial should dampen Soviet enthusiasm to engage in, or match, American competitive escalation.

In short, it is assumed that the Soviet leadership would find the prospect of victory-denial an insuperable disincentive to engage in central war and competitive escalation because it exploits a central (though not quite uniquely) Soviet concern (i.e., regime maintenance) and addresses a central (though not quite uniquely) Soviet rationale for nuclear use (i.e., military expediency). As such, it should provide an effective firebreak against Soviet escalation of a localized crisis, or military breakout from a political crisis. The U.S. capability to deny victory to the Soviet Union at any level of central war should provide the U.S. President with a form of escalation dominance.

The DOV theory entails a two-edged threat; it should:

- nullify the military imperative that dominates the Soviet view of the utility of nuclear weapons.
- in extremis, exploit the Soviet fear of an inability to maintain hegemony over its Eastern European and domestic transnational empire

The effect of such a comprehensive deterrence theory should be to:

- give the Soviet Union a great incentive to avoid provoking U.S. strategic nuclear employment.
- give the Soviet Union, itself, the most effective incentive to avoid initiating strategic nuclear employment.
- coerce the Soviet Union into exercising intra-war targeting restraint should prewar deterrence fail.
- promote U.S. war-survival in the event pre- and intra-war deterrence fails.

Given Soviet criteria for victory, U.S. execution of an assured destruction type threat could be considered a form of victory denial. However, integral to, and essential for, a capability and threat to deny victory to the Soviet Union is the need to discipline the Soviet reply to U.S. nuclear use. The U.S. president would justifiably have little interest in denying victory to the Soviet Union, or advertising a threat so to do, if the anticipated cost would entail scores of millions of American fatalities.

A serious damage-limitation capability cannot sensibly be separated from the DOV theory of deterrence. Regardless of the sophistication

of U.S. targeting concepts, an American President should have scant interest in competitive threat escalation if he anticipated resultant fatalities numbering in the scores of millions. Serious damage-limitation is the only means of circumventing the self-deterrence mechanism and consequently ensuring that the credibility of the U.S. deterrent is maximized.

In addition, the threat of denying victory to the Soviet Union at any level of central war should be a powerful firebreak promoting pre- and intra-war deterrence. However, any putative deterrence mechanism could amount to so much intellectual irrelevance in the event of some unpredictable crisis. If the U.S. is to wield the threat of initiating central war and dominating the subsequent escalation process, the President should be confident that he is not dependent upon some incredible notion of cooperative (if coerced) Soviet targeting restraint to limit American casualties to not intolerable levels.[92]

A serious commitment to damage-limitation is also integral to a theory of victory denial in and of itself. A U.S. capability to nullify Soviet arms and, if necessary, influence the postwar world obviously requires the protection of the more important of American societal assets. Perhaps at this juncture the integrity of U.S. pre- and intra-war deterrence, and war-survival objectives is most evident. A serious damage-limitation capability should render the U.S. denial of victory deterrent threat credible, and the heavily counterforce target set required for a DOV theory should complement U.S. war-survival efforts if deterrence fails.

The targeting philosophy inspired by a denial of victory deterrent would be similar to what may be seen as the leitmotiv of PD-59.[93] The threat of destroying Soviet military projection (and domestic control) assets and strategic nuclear weapons would be unprecedentedly prominent categories in the U.S. strategic nuclear target set. However, there would be some targeting tradeoff issues pursuant to political goals:

- should the Soviet NCA be targeted initially to effect the most complete feasible attrition of strategic nuclear capability (by way of damaging command and control, or in Soviet terminology, effekivonost'), or should the NCA be avoided so as to maximize the possibility that the Soviet leadership might cooperate in exercising war-waging restraint and effecting (hopefully) early war termination?
- to what degree should collateral damage be avoided at the expense of military expediency in an effort to promote devolution of the Soviet political system?

Specific answers to such issues are in large part scenario-dependent and would be affected particularly by the anticipated offensive and defensive efficacy of the U.S. force posture. However, general criteria for a DOV target set can be envisaged. The U.S. should target, in order of urgency:

- strategic (and theater-operational) nuclear weapons and C^3I.
- power projection and general purpose forces.
- war-supporting industry.
- leadership.
- the entire scope of the Soviet political-military organization.

As important as the items included above are those absent. Denial of victory would not mandate indiscriminate counter-industrial, counter-economic recovery, and/or counter-population strikes. The avoidance of such targeting could promote intra-war deterrence and should enhance the prospects of political devolution. However, these authors are neither unduly optimistic concerning the feasibility of promoting "Balkanization" in the U.S.S.R., nor do they advocate the design (let alone the execution) of counter-control attack options which might detract from the efficacy of U.S./NATO counter-military targeting. The West's superordinate interest would be the avoidance of defeat, not the coerced break-up of the Soviet Empire.

Victory-denial deterrence need not wholly supplant the concept of assured destruction. Indeed, the threat to destroy the entire scope of the Soviet political-military structure would be intended to serve as an "ultimate deterrent." However, the limitations on such deterrent threat would be recognized, and it would be reserved for that contingency wherein its credibility would be sound because its implementation would no longer be dysfunctional--as a response to a massive Soviet attack on American cities. Maintaining such a threat should ensure that pre- and intra-war deterrence against counter-city attacks would remain formidable.

The employment policy militarily most expedient would probably (although not necessarily) be preemptive in character. However, preemption may not be possible and victory-denial/war-survival planning should not be predicated upon a first-use assumption. When considering an employment policy appropriate for extended deterrence and escalation

dominance, threatened first-use cannot be eschewed. In addition, a politically symbolic or severely limited initial strike would render a denial of victory objective more difficult to attain if, as might be expected, subsequent Soviet employment was heavily counterforce. The adoptation of a more preemptive mode to U.S. strike planning should not have the (crisis-time) destabilizing consequences long alleged by Western strategic theorists. Preemption, in the sense of an initial heavy disruptive strike--kontropodgotovka, in traditional Soviet artillery usage--has long been a central principle in Soviet military science. If war is inevitable, it is not politically provocative to wage it in the most intelligent manner possible.

A denial of victory deterrent is impervious to the usual criticisms of a "war-fighting" oriented theory, particularly within the context of SALT III deep force level reductions.

The prospect of a serious U.S. capability to destroy Soviet ICBMs in their silos is often scored as a potential contributor to "crisis-instability."[94] It is charged that an effective U.S. countersilo capability would pressure Soviet leaders to preempt during a crisis for fear of losing the bulk of their strategic nuclear arsenal to a U.S. first-strike ("use them or lose them" as the saying goes). However, if the U.S. has ensured a high degree of force survivability, and a recognized capability to deny victory to the Soviets at any level of central war, there should be significant military disincentives inhibiting Soviet preemption.

Soviet military science values nuclear weapons because of their potentially decisive military effects; the purpose of initial employment

would be to gain a decisive military advantage over the opponent (not to make a political point).[95] If the U.S. strategic nuclear arsenal were highly survivable, as would be essential to a victory-denial posture, the Soviets would be granted no profitable, or loss-minimizing set of aim points to target pursuant to their military objectives. It hardly seems reasonable, given Soviet doctrine and style of war, that Soviet leaders would employ nuclear weapons without any ostensible purpose other than their use in a wholly forlorn operation. Preemption should appear particularly unattractive when strategic nuclear employment, rather than gaining a more advantageous position for the Soviet Union, instead would promote a measurable Soviet disadvantage, while it would also provoke anticipation of "more grievous things to come." (The latent threat of political devolution should serve the U.S. well in such a context). A denial of victory posture, and related force posture should make Soviet strategic nuclear employment appear to be the least favorable option even during acute crises. It is important to note that even a very robust U.S. denial of victory deterrent posture might fail to deter should Soviet leaders be sufficiently desperate. These authors advocate the physical defense of North America both for reasons of improving deterrent effect, and because it is possible that deterrence--pre- and intra-war--might fail (or simply not apply), regardless of the quantity and quality of Western defense preparation.

A second criticism of any U.S. move towards a war-fighting/damage-limiting strategic nuclear orientation is to the effect that such a force posture would instigate "an ever spiraling arms race."[96] It is almost certainly true to claim that a DOV deterrent would cause

great concern within the Soviet Union. After all, the United States consciously would be planning to defeat Soviet nuclear strategy. However, the significant question is whether such Soviet discomfort would engender an "ever spiraling arms race," and if so, whether the U.S. should therefore avoid arousing Soviet concern.

Considering the character of Soviet strategic nuclear doctrine, alarm aroused by U.S. efforts to reduce the operational feasibility of that doctrine would be an unavoidable concomitant to any adequate U.S. "countervailing strategy." It should be recognized that any U.S. doctrinal reorientation that threatens the efficacy of Soviet strategy would bring down a hail of Soviet criticism. (Witness the Soviet propaganda campaigns waged in attempts to discredit "the Schlesinger doctrine," the upgrading of Minuteman III warhead yields with the MK12A RV, cruise missiles, the "neutron bomb," and modernization of NATO's long-range theater-nuclear arsenal in Europe). However, that is not to conclude that such a reorientation would not be beneficial (for the West), nor that it need accelerate Soviet strategic nuclear programs.

The level of Soviet defense spending probably is determined very largely by constraints imposed by economic imperatives,[97] and the Soviet economy already is on a semi-war footing (in Western perspective). It seems unlikely that the Soviet Union would (or could) engage in a much more heated "arms race" than they have run over the previous decade. Unilateral U.S. strategic arms restraint certainly has not checked Soviet racing, U.S. efforts to establish a coherent theory of deterrence should fare no worse. Indeed, it could be argued that a denial of victory oriented force posture would inhibit Soviet arms

racing. An effective means of restraining the Soviet penchant for arms racing may be by making explicit, and credible, to the Soviets the (new) fact that such competitive activity has no prospect of rendering feasible a desirable match between their doctrine and "armament norms"[98]

In addition, the charge that a denial of victory deterrent would instigate an uncontrollable arms race could hardly appear credible if DOV is introduced within the context of SALT III deep force level reductions. However, there can be no sidestepping the requirement to answer the predictable important charge that a DOV deterrent, as outlined here, might complicate greatly the task of negotiating a SALT III deep-reductions regime. Anyone who makes such an allegation almost certainly will be admitting more than he intends or even recognizes. Arms control problems very often are not synonymous with defense planning problems. The ends of arms control can be achieved only if defense planning is sound. If, as the historical evidence to date appears to suggest strongly, the Soviets favor the SALT process in very good part <u>because that process assists them in developing a war-winning/war-surviving posture</u>, then the time is long overdue for the United States to alter the rules of the game--or decline to play altogether. These authors believe that the West should attach higher priority to the prospective defeat of Soviet strategy, than to the securing of SALT agreements. If the <u>only</u> SALT agreements that are negotiable are those which are attractive or at least benign from the perspective of Soviet military science, then the United States should reexamine the net benefit of the entire SALT enterprise. We do not presume that the deterrent postural desiderata explicit and implicit in this analysis necessarily are incompatible

with productive SALT negotiation. That may prove to be the case, but reality testing would be worthwhile. A wise labor negotiator once observed that you should never sit down at the bargaining table when you are prepared to stand up.

Perhaps the most amorphous criticism of a force posture emphasizing war-fighting capabilities is that efforts to render central war survivable will make it more "thinkable," and thus more probable.[99] This criticism is based upon the assumption that the probability of central war is affected by its level of catastrophe. Whether this is a valid assumption certainly is not known, and is indeed unknowable. What is certain is that even with damage-limitation programs, central war would be an unparalleled catastrophe for the U.S. The initiation of central war would remain an option to be implemented only under the most severe duress.

If the assumption is valid that the less catastrophic an anticipated central war, the more probable its occurrence, some very modest increase in probability of occurrence may be considered an acceptable tradeoff for the associated prospect of survival. However, it seems equally if not more plausible that a DOV deterrent would reduce the probability of war by enhancing the credibility of the U.S. deterrent across the threat spectrum; a feat assured vulnerability logically is unable to perform.

In addition, a small residual threat of strategic nuclear war probably is a suitably robust deterrent in the context of day-by-day international politics. However, during those periods of acute crisis wherein deterrence of the Soviet Union could be difficult if not impossible

to effect, the irresponsibility and political inutility of consciously maintaining wholesale U.S. societal vulnerability would be manifest. A denial of victory deterrent should provide both the fruits of a robust deterrent, and coherent guidance should deterrence fail.

1.8 A Denial of Victory Deterrent and SALT III

The victory-denial theory of deterrence is appropriate as the U.S. basis for SALT III negotiations for two reasons. First and foremost because it would provide the U.S. with an adequate logical framework for meeting its deterrent responsibilities. The alternative American notion of mutual vulnerability can neither speak logically to U.S. deterrent requirements, nor hold any prospect of war-survival in the absence of an incredible degree of cooperative Soviet targeting restraint.

Beyond its general suitability for U.S. requirements, a DOV deterrent is compatible with a SALT III regime characterized by deep force level reductions. A threat to attack Soviet strategic nuclear assets may well be particularly appropriate to the relatively small, high value, target set that would be licensed under a truly deep-reduction SALT III regime.[100] The objective of damage-limitation mandated by a victory-denial deterrent should be complemented by deep force level reductions. Active and passive defenses would become increasingly significant as massively heavy attacks become less and less feasible. The enhanced significance of active and passive defenses obviously would also make the Soviet damage-limitation mission easier to realize. However, the DOV theory of deterrence is not dependent upon an American capability to hold some high percentile of Soviet industry and/or population hostage. Soviet efforts to enhance strategic-force survivability might also be abetted by deep force level reductions. However, this need not be inconsistent with victory- denial, if the U.S. ensures the survivability and penetrability of its own forces. A cost-exchange ratio close to unity or even favoring the defense need not be inconsistent with a

comprehensive U.S. threat to deny victory to the Soviet Union in central war.

In short, deep force level reductions could complement a DOV deterrent theory: severe SNLV limitations should impact positively upon U.S. damage-limitation efforts, while the same effect on Soviet programs is not inconsistent with victory-denial. The potential for increased force survivability on both sides (because of the enhanced significance of active defenses and the limited number of RVs available) would not have a negative impact upon the U.S. DOV threat unless the U.S. ignored the necessity of its own force survivability.

A DOV deterrent would also be appropriate for SALT III because its force posture requirements would be suited to the type of deep force level reduction regime that the Soviet Union would be most likely to accept. Ideally, such a rationale should not be a factor determining the U.S. theory of deterrence. To repeat an earlier refrain, a theory of deterrence should inform arms control negotiations--not vice-versa. However, preferred utopias aside, it must be recognized that negotiability will shape the force posture constraints effected at SALT III, and hence the feasibility of particular strategic doctrines.

Deep force level reductions acceptable to the Soviet Union probably would be characterized by an emphasis on the maintenance of a war-waging, war-surviving oriented force posture. Because of the enduring character of its doctrinal desiderata, the Soviet Union probably will be interested in mutual restrictions on damage-limiting capabilities only if the net effect on prospective war-fighting capabilities is judged to be positive (i.e., if Soviet defense planners discern a high likelihood

of deriving measurable advantage thereby). Soviet planners would have to assess the rival merits of mutual restrictions or mutual laissez-faire with respect to particular weapons. For example, the Soviets would have to consider the rival merits of banning or permitting MPS basing for ICBMs. This particular case is elementary to resolve, since the United States is in far greater proximate need of so-called "survivable" basing for its ICBMs than is the USSR (at least, pending the deployment of MX in numbers). Soviet willingness to agree to a ban on MPS basing is reflected in the terms of the SALT II Protocol, and in the expressed Soviet hope that the Protocol will establish a precedent for SALT III.[101]

The Soviet Union probably would be most likely to accept SALT III deep force level reductions generally chracterized by:

- quantitative restrictions on SNLVs, but without significant limitations on warhead fractionation or throwweight.
- an absence of limitations on continuing programs of active and passive defense.

A SALT III agreement characterized by these very general parameters would be compatible with the postural requirements of a DOV theory of deterrence. However, assuming the continuing long term Soviet pursuit of damage-limitation capabilities, such an agreement in SALT III would not be suitable for a continuing U.S. commitment to the precepts of the mutual vulnerability theory of deterrence.

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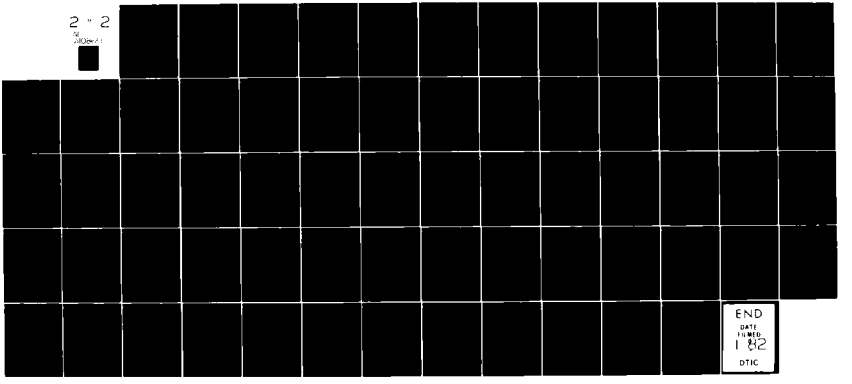

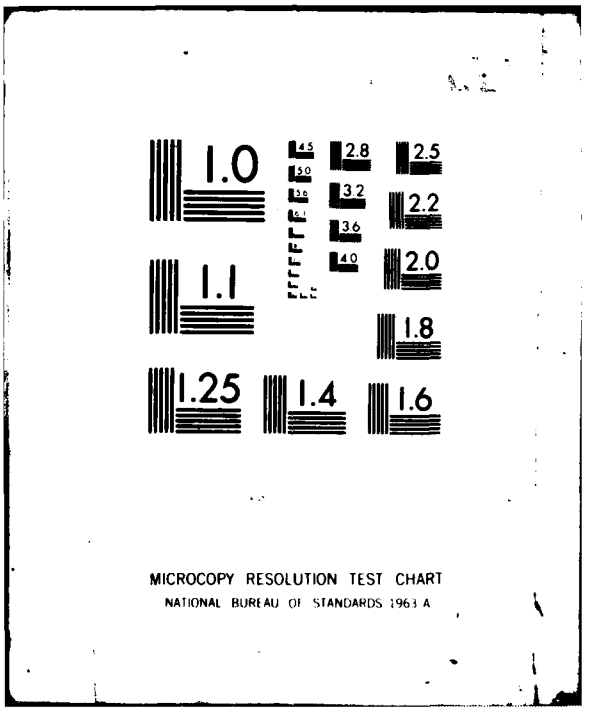
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1.9 Denial of Victory: Force Posture Requirements and SALT III

A strategic nuclear force posture compatible with victory denial would transcend the currently declared theoretical basis for U.S. acquisition policy. According to the FY 1980 Department of Defense Report,

> In the interests of stability, we avoid the capability of eliminating the other side's deterrent, insofar as we might be able to do so. In short, we must be quite willing--as we have been for some time--to accept the principle of mutual deterrence, and design our defense posture in light of that principle.(102)

A force posture appropriate for a DOV deterrent would specifically emphasize a capability to destroy "the other side's deterrent," and protect U.S. societal assets. Both functions are inimical to the model of "stability" implicit in the above quotation and the concomitant determination of what is or is not "in the interests of stability." However, as this analysis has illustrated, that model of stability is inappropriate as the basis for determining the acquisition policy which drives the U.S. strategic force posture.

The U.S. strategic force posture should function to protect American lives and industry. The three modes of physically defending U.S. societal assets should function synergistically: offensive counterforce, active defense, and passive defense. Constraints on active and passive defenses should be pursued in SALT III only if the net effect of such constraints permits more effective means of achieving damage-limitation objectives.

It is possible that despite all efforts to protect American society the Soviet Union could inflict very high casualities if it sought to maximize U/I destruction.[103] However, such a Soviet effort would constitute a somewhat implausible central war scenario. The Soviets may purposefully

target some non-military aimpoints in an effort to demoralize the U.S.[104] However, to waste warheads in a conscious attempt to maximize fatalities would be inconsistent with the known character of Soviet military science. The Soviet approach to nuclear employment emphasizes military expediency for strategic effect, not punishment for its own sake. In addition, massive Soviet city-(and evacuation site-) busting options that might render futile U.S. damage-limitation efforts could, and probably would, remove any targeting restraint on the U.S. part. Thus, it seems reasonable to pursue damage-limitation in anticipation of significant protection, even if the theoretical possibility exists that such efforts could prove to be grossly inadequate.[105] Indeed, to neglect defenses that could prove significant in many, and indeed most, plausible central war scenarios, would be irresponsible. Continued rejection of feasible defenses would be to ensure that the Soviets could inflict high casualties if deterrence were to fail, even if they chose not to attempt to maximize U/I destruction.

A U.S. force posture emphasizing counterforce targeting and damage-limitation must be survivable, particularly in the context of deep force level reductions. To minimize crisis instability, Soviet planners should be faced with an impossible targeting task in any attempt preemptively to restructure the strategic balance. U.S. counterforce capabilities should be survivable so as to provide the desired firebreak effect inhibiting Soviet competitive escalation. The specific percentage of U.S. forces (CMP, EMT, throwweight, etc.) that must be capable of surviving a large scale Soviet attack obviously is difficult to predetermine outside of the particularities of the scenario. However, to deny the

Soviet Union any logical incentive to preempt, or engage in competitive escalation, the U.S. force posture should be capable of enforcing an unacceptable cost-exchange ratio upon Soviet forces (assessed in terms of throwweight). An "unacceptable" cost-exchange ratio may not necessarily require the imposition of a massively unfavorable throwweight penalty on a Soviet attack; it may be sufficient if the Soviet Union cannot anticipate any measurable military advantage from its attack.[106] This should be the case if the Soviet leadership, as might be expected, considers the waging of an unwinnable central war to be virtually equivalent to the losing of a war.

In short, U.S. strategic nuclear forces must be survivable in order to provide the crisis stabilty and escalation dominance envisaged by a DOV theory of deterrence. Survivability would be particularly important following deep force level reductions because of the enhanced relative significance of each SNLV. Each launch vehicle takes on increased importance as limited numbers equate to fewer hedges (to a smaller margin for survivability). Soviet ICBM stockpiling and cold launch capability in addition to the possibility of Soviet cheating on the terms of a SALT III, would require U.S. forces to be more survivable than would be implied by simple reference to Soviet on-line strategic nuclear weapons.[107]

A corollary of the need for survivable strategic nuclear weapons is the requirement for C^3I capable of endurance in a very hostile environment. The current vulnerability of U.S. strategic C^3I to Soviet attack is acknowledged officially.[108] Ideally the U.S. NCA should be capable of responding to a Soviet attack with whatever pre-planned option seems

most appropriate, or with a more suitable improvised option. The threat of victory denial obviously places demanding requirements on U.S. battle management capabilities. Nonetheless, it is an apparent strategic fact of 1980 that much of the long-vaunted flexibility in U.S. strategic force employment is illusory. A massive American retaliatory strike, or even massive disruptive first-strike, could be mandated by the well understood vulnerabilities of U.S. C^3I. The "fog of battle" may reign supreme--thereby frustrating any attempt by a surviving U.S. NCA to wage a general war in a carefully controlled manner for political ends.

The traditional arguments in favor of a diversified force posture are even more persuasive in the context of severe force level reductions. The existence of a triad, rather than a dyad or monad, complicates Soviet offensive and defensive planning. The triad functions synergistically so as to enhance the capability of each leg to survive attack and strike Soviet targets.[109] As Soviet active and passive defenses become relatively more significant subsequent to SALT III deep force level reductions, the beneficial effects of a multiplicity of threats similarly become more important. In addition, the complication of Soviet attack planning through a diversity of threat profiles will be increasingly important as severe reductions are made in SNLVs.

By way of generic guidance, the U.S. force posture appropriate for a DOV theory of deterrence in the context of deep force level reductions, should be characterized by:

- serious war-survival programs including active and passive defenses.

- survivable strategic nuclear weapons capable of attacking a comprehensive target set, particularly including hardened point-targets.
- survivable C^3I and battle management facilities.
- a diversity of delivery systems.

An attempt to determine the detail of an optimal U.S. force posture under SALT III must be somewhat conjectural. The optimal mix and type of forces required will be influenced greatly by the character of the Soviet force posture and the capability of each side's systems. However, with that caveat in mind, this analysis will place some detail on the conceptual skeleton outlined above.

Assuming that the duration of a SALT III would extend from a 1985 termination of (the now defunct) SALT II until 1990 or 1995, the U.S. force posture would be determined by contemporary decisions on force postural development. Thus, it is possible to determine the general character of a U.S. force posture feasible under SALT III, and the ways in which various deep force level reduction regimes might best be suited to U.S. deterrence needs and capabilities.

The extreme vulnerability and limited countersilo capability of the Minuteman and Titan II force render the current land-based missile force inadequate for a victory-denial deterrence theory. The ICBM survivability and countersilo capabilities necessary to provide crisis stability and U.S. escalation control appear to be possible characteristics of the horizontal MPS MX system that could be fully operational during the the tenure of a SALT III.[110] The MX system must (or, at least, should) present an entirely unattractive target structure to Soviet

planners if it is to contribute to deterrence stability. A survivable MX should provide an effective inhibitor to Soviet competitive escalation because of the potential net throwweight loss the Soviet Union would suffer in an MPS-Soviet warhead duel.

The level of MX deployment under SALT III should depend upon MX targeting duties. Assuming the principal mission to be the prompt destruction of hardened time-urgent targets, changes in the Soviet ICBM force posture resultant from deep force level reductions would also help determine the level of MX deployment. A rough determinaton can be made of the necessary number of MX if, as a hypothetical projection, it is assumed that SALT III entails a 1750 aggregate SNLV ceiling, a 1100 MIRVed SNLV subceiling, a 550 MIRVed ICBM launcher subceiling, and a 150 HICBM launcher sublimit, (following the general outline of the U.S. March 1977 proposal). Assuming that the Soviet Union retains 550 MIRVed ICBM launchers (SS-17/18/19s or follow-ons, with warhead fractionation to the SALT II limit of 10 warheads), and approximately 350 non-MIRVed ICBM (follow-ons to the SS-11) launchers, it would have approximately 5900 on-line ICBM countersilo-capable warheads. If the Soviet Union targeted approximately 1400 warheads against Minuteman silos, and 4350 warheads against MX, the U.S. would require approximately 240-250 MX launchers and 5520-5750 shelters to ensure the survival of 50-60 MX. That number of surviving MX may be considered the minimum sufficient to attack withheld Soviet launch vehicles, other hardened point targets such as C^3, and maintain a sizeable reserve.

If SALT III deep force level reductions entail SNLV ceilings of 1500 or 1250, with proportional sublimits on MIRVed SNLV, MIRVed ICBM

launchers, and HICBM launchers, the U.S. would need approximately 215 and 180 MX launchers respectively to maintain the same level of survivability.

If the Soviet Union were to fractionate its ICBM throwweight beyond the assumed 10 RV SALT II level, and/or if the Typhoon SS-N-XX SLBM were to attain a countersilo capability, the above figures could be affected substantially.[111] To absorb an increased number of Soviet warheads the U.S. could augment the MX system with additional shelters, (i.e., it could "backfill"), and/or it could deploy the Low Altitude Defense System (LoADS) designed primarily for compatibility with MX defense.[112] The combination of deceptive basing and adaptive preferential ballistic missile defense should provide a cost-effective means of ensuring MX survivability against an open-ended Soviet threat.

The role of Minuteman would remain important following MX deployment. Minuteman warheads (including Minuteman II warheads if upgraded according to SAC proposals) could be useful in first-use options. If the U.S. sought to execute a LNO without use of MX, the Minuteman force could be employed. In addition, Minuteman silos would constitute a drain on Soviet warheads in any attack planning, thereby enhancing the survivability of MX and the other legs of the triad. It is worth noting that a sophisticated, Soviet real-time attack assessment capability should be capable of identifying the MX "clusters" from which MX ICBMs in an LNO role were launched. So long as the United States holds to the "closed" cluster concept each MX ICBM firing would remove twenty-three hardened arm points from the Soviet TDI.[113]

Deployment of a survivable countersilo capable ICBM may well be the only means of inducing the Soviet Union to reduce its MIRVed ICBM arsenal. However, the currently planned force of 200 MX launchers does not allow the U.S. much of a negotiating margin. As illustrated above, the U.S. will need close to, or more than, 200 MX launchers in the context of deep force level reductions. The March 1977 proposal as a "base case" would probably not reduce the need for MX below 250 launchers unless the 150 HICBM launcher sublimit included SS-18 and SS-19 launchers (as would have been required by the initial U.S. SALT I position). However, with the current contrary precedent set, the prospect for inclusion of SS-19 launchers under the 150 sublimit virtually is null. Thus, to initiate the U.S. negotiating position with 200 planned MX launchers may leave the U.S. with little bargaining leverage.

The MX hard target capability may induce the Soviets to pursue some form of ICBM launcher mobility.[114] If so it may be difficult to continue the SALT process along its now traditional format. It is difficult to imagine the Soviet Union constraining a mobile system sufficiently so as to meet U.S. verification requirements. However, the concept of deterrence through victory denial does not depend upon fixed Soviet ICBM silos. Soviet mobility may erode U.S. confidence in its capability to strike withheld ICBMs (second-strike counterforce). However, the potential capability of a significant number of MX to survive a virtually open-ended Soviet ICBM threat should help sustain the threat of victory denial even if the U.S. cannot be confident in its capability to strike all Soviet ICBM launchers. It should be observed that the threat of Soviet ICBM "breakout" would not originate from

an MX-induced Soviet move to a mobile basing system. The Soviet capability to launch cannisterized ICBMs is not dependent upon verifiable silo basing whether the Soviet Union adopts mobility or not.

There are some enduring reasons for placing primary responsibility for hardened-point targeting in the land-based missile force, such as the relatively more capable and reliable C^3.[115] In addition, MX will reach IOC and be available in significant numbers several years before a countersilo capable Trident D-5 SLBM. However, the SLBM force could provide some of the countersilo targeting redundancy important in a deep force level reduction regime.[116] In addition, the SLBM force could continue to serve as the basis of the withheld ultimate sanction for deterrence purposes. The D-5 SLBM will have a significant hard target capability and its reported 1990 IOC might be accelerated by two or three years. If so, several Trident submarines could be equipped with D-5 SLBMs and provide a necessary countersilo targeting redundancy during the tenure of SALT III.

The number of SSBN, and SLBM tubes feasible during the period 1985-1990 is being determined by contemporary decisions. The Trident shipbuilding program has slipped from three submarines every two years to one per year. Six Trident SSBNs have been requested for FY 79-84 rather than the initially intended nine. This delay will affect the capability of the submarine deterrent during the tenure of a SALT III. If Trident delivery does not lag further, twelve ships should be deployed by 1990. A Trident submarine takes seven years from full authorization to IOC. If the number of Trident during SALT III is to be increased, the delivery rate must be expedited soon.[117] The Poseidon force will

begin to reach the end of its 25-year service life in 1988, and the entire force will reach bloc obsolescence by 1992. However, the Navy plans to extend the Poseidon service life, and the twelve submarines backfitted with C-4 SLBMs will be the last to go out of service.[118]

Assuming the continuation of the current Trident delivery rate, and the continued service of the twelve Poseidons backfitted with C-4, the U.S. would have at least 480 SLBM tubes available through 1990. A force of 12 Trident and 12 Poseidon SSBNs would permit the U.S. to deploy 550 MX/Minuteman III ICBM launchers and retain 70 MIRVed launchers under a subceiling of 1100 MIRVed SNLVs. If a larger margin is desired for cruise missile carriers, or if SALT III entails MIRVed SNLV ceilings below 1100, the number of Minuteman III and/or Poseidon launchers could be reduced.

The unique characteristics of the air-breathing leg of the triad suggest strongly that it should not be allowed to become obsolete. The flexibility of employment, direct political demonstrative value, and the possibility for recall and reuse render a viable air-breathing leg very valuable.[119] A modern bomber force would be particularly appropriate for a slow counterforce strike against non-time-urgent hardened targets such as cold-launch silos and possibly C^3.

However, the U.S. cannot have confidence in the continuing capability of the aging B-52 force to survive SLBM attack and penetrate Soviet active defense beyond the mid-1980s. As William Perry recently observed, "Sometime in the mid-eighties, that airplane's ability to penetrate the air defenses of the Soviet Union will be problematic. In fact to put it more strongly it will be doubtful," and ..."the danger to

the bomber force from a preemptive attack of SLBMs which could strike the bombers at their bases will be developing at about that time."[120] General Ellis recently acknowledged that the "majority" of the modernization programs necessary to sustain a reliably, high B-52 probability to penetration even until 1985 are not budgeted in the Five Year Program.[121]

A "mixed force concept" of penetrating bombers and cruise missile carriers, rather than one or the other, is the most effective way of spending resources on an air-breathing capability. A combination of penetrating bombers and ALCMs forces Soviet defense planners to cope with two different types of threat at high cost. The need for a follow-on penetrating bomber will exist by the mid-1980s. However, the current Administration does not plan to make a development decision on a new bomber before 1981 or 1982.[122] As such it would seem improbable that a new bomber could reach IOC until after 1990. To maintain a viable air-breathing leg of the triad through the late 1980s the U.S. could deploy B-1 derivative penetrating bombersand cruise missile carriers. The nuclear hardening of the basic B-1 design, its superior base escape capability, dual use potential, and the possibility of an early IOC make the B-1 core aircraft a possible and indeed attractive solution to the approaching obsolescence of the B-52 aircraft.[123]

Under a SALT III 1750 SNLV ceiling/1100 MIRVed SNLV subceiling the U.S. could deploy 200 B-1 derivative and B-52 penetrating bombers if 450 Minuteman II remain in service. (SAC plans to replace all 450 Minuteman II booster motors in the "motor washout" program, and Minuteman II should not be forced into retirement by deterioration during the tenure of SALT III that endured from 1985 to 1990.) If deep force

level reductions entail SNLV ceilings lower than 1750, a more severe tradeoff between penetrating bombers and Minuteman II launchers would have to take place. The extreme vulnerability of Minuteman II silos, and the relatively high number of ICBM warheads in the Minuteman III and MX systems might argue for more severe deep force level reductions at the expense of Minuteman II launchers. Very low levels of penetrating bombers may not be adequate in a SALT III regime lacking limitations on Soviet air defenses.

The Soviet Union has a new intercontinental bomber under development. Prototypes of the new long range bomber are expected to appear in the near future and, according to General Allen, the first units could become operational in the mid-1980s.[124] In addition, recent intelligence reportedly indicates that Backfire aircraft are intended to hit U.S. C^3I in the early phases of a nuclear war.[125] Despite the anticipated increased significance of the Soviet manned bomber threat the U.S. currently plans little augmentation of CONUS active defenses.

An official rationale for the continued absence of U.S. air defense is the traditional observation that so long as the U.S. cannot defend against an ICBM attack there is little point in defending against the much lesser threat of bomber attack.[126] However, in the context of a serious effort to limit damage to the U.S., and a theory of deterrence based upon victory denial, the value of air defense is apparent. The combination of an air defense missile system now maturing in development, modernization of the interceptor force with F-15s or F-14s and E-3A aircraft designated for strategic defense, and OTH-B radar, could be an appropriate initial response to the intensified Soviet bomber threat.

Based upon this outline a general estimate of the strategic offensive force posture appropriate for various possible deep force level reductions is illustrated on the following pages.

Model One: SALT III Deep Force Level Reduction

1750 SNLV ceiling

1100 MIRVed SNLV subceiling

550 MIRVed ICBM launcher subceiling

150 HICBM launcher subceiling

-- 250 MX launchers, 5750 shelters

-- 250-300 Minuteman III launchers

-- 400-450 Minuteman II launchers

-- 480 D-5 and C-4 SLBM tubes

-- 70-120 B-1 derivative and B-52 CMC

-- 200-250 B-1 derivative and B-52 penetrating bombers

Model Two: SALT III Deep Force Level Reduction

1500 SNLV ceiling

950 MIRVed SNLV subceiling

475 MIRVed ICBM launcher subceiling

125 HICBM launcher subceiling

-- 215 MX launchers, 4945 shelters

-- 180-240 Minuteman III launchers

-- 350-400 Minuteman II launchers

-- 416-480 D-5 and C-4 SLBM tubes

-- 75-100 B-1 derivative and B-52 CMC

-- 200-250 B-1 derivative and B-52 penetrating bombers

Model Three: SALT III Deep Force Level Reduction

1250 SNLV ceiling

800 MIRVed SNLV subceiling

400 MIRVed ICBM launcher subceiling

110 HICBM launcher subceiling

- -- 180 MX launchers, 4140 shelters
- -- 150-200 Minuteman III launchers
- -- 200-250 Minuteman II launchers
- -- 368-416 D-5 and C-4 SLBM tubes
- -- 50-100 B-1 derivative and B-52 CMC
- -- 150-200 B-1 derivative and B-52 penetrating bombers

The projected SALT III limitations, and the related force levels, are necessarily very tentative. Yet the illustrated force postures generally emphasize the requirement for strategic offensive weapons capable of war-fighting. In additon, these offensive force levels should be viewed in a more comprehensive context of serious active and passive defenses, and durable C^3I. The projected SALT III force levels would require the U.S. to avoid extension of the SALT II Protocol, and would require revision of the ABM Treaty if a Low Altitude Defense System is necessary, or judged to be very desirable, for the integrity of MX.

The Soviet Union may well be reluctant to enter into deep force level reductions if it is apparent that the U.S. will pursue what fairly might be termed a "war-fighting" force posture within a deep reductions regime. The Soviets may have to be induced to accept such limits by an apparent U.S. willingness to deploy a relatively more robust posture outside of a SALT framework. What is negotiable with the Soviet Union should be of much less significance in determining the U.S. position at SALT III than the postural requirements of a strategic nuclear doctrine that coherently relates the threat or use of force to U.S. foreign policy goals. The minimum variants of mutual vulnerability would not require the robust force postures illustrated above. However, such notions of deterrence are logically inadequate to meet U.S. foreign policy requirements now or in the foreseeable future. In light of the character of the U.S. opponent, and foreign policy responsibilities, U.S. arms control policy in SALT III should be guided by a theory of deterrence based upon denying victory to the Soviet Union, and a force

posture capable of effecting that objective. The value of SALT III to the U.S. may then be determined according to its capability to limit Soviet deployments in such a fashion as to make U.S. doctrinal requirements more readily attainable.

Footnotes

1. See Thomas C. Schelling and Morton H. Halperin, Strategy and Arms Control (New York: The Twentieth Century Fund, 1961).

2. "The Future of Nato," The Washington Quarterly, Vol. 2, No. 4 (Autumn 1979), pp. 3-12.

3. See, for example, Edward L. Rowny, "Negotiating With the Soviets," The Washington Quarterly, Vol. 3, No. 1 (Winter 1980), pp. 58-66. While, for an analysis which has stood the test of time, see Fred C. Ikle, How Nations Negotiate (New York: Praeger, 1967. First pub. 1964).

4. See section 2:3 of this report: "SALT III and Verification."

5. Indeed, smaller strategic forces, because of their greater fragility vis à vis cheating and "breakout," should encourage the U.S. to spend more money on strategic intelligence and warning assets.

6. For example, as with Anglo-American naval arms limitation in the 1920s and 1930s.

7. This has long been known as "the arms control paradox."

8. This thesis is presented in Colin S. Gray, "Arms Control in Soviet Policy," Air Force Magazine, Vol. 63, No. 3 (March 1980), pp. 66-71.

9. The authors are indebted to the nuclear (war) proliferation studies conducted at Hudson Institute by their colleague, Lewis A. Dunn. See Lewis A. Dunn and Herman Kahn, Trends in Nuclear Proliferation, 1975-1995: Projections, Problems, and Policy Options, HI-2336/3-RR (Croton-on-Hudson, New York: Hudson Institute, May 15, 1976); and Lewis A. Dunn, Changing Dimensions of Proliferation Policy, HI-2497-RR (Croton-on-Hudson, New York: Hudson Institute, November 2, 1976).

10. Arms and Politics, 1958-1978: Arms control in a Changing Political Context (Toronto: Macmillan of Canada, 1979), particularly Chapters 1-2.

11. On this subject see Colin S. Gray, "Strategic Stability Reconsidered," Daedalus, Vol. 109, No. 4 (Fall 1980), pp. 135-154; and Richard Burt, "Arms control and Soviet Strategic Forces: The Risks of Asking SALT to Do Too Much," The Washington Quarterly, Vol. 1, No. 1 (January 1978), pp. 19-33.

12. White House Years (Boston: Little, Brown, 1979), p. 217.

13. U.S. House of Representatives, Committee on Appropriations, Subcommittee on the Department of Defense, Department of Defense Appropriations

for 1980, Hearings, Part 3, 96th Cong., 1st sess. (Washington, D.C.: USGPO, 1979), pp. 728-729.

14. Ibid., p. 444.

15. Targeting philosophy is not a subject that has attracted much extra-official attention over the years. The difficulty of accessible reliable information is one reason for this, as is the fact that even if acquired such information naturally is subject to severe security regulation. However, the following items of open literature open the door somewhat: Henry S. Rowen, "The Evolution of Strategic Nuclear Doctrine," in Laurence Martin, ed., Strategic Thought in the Nuclear Age (Baltimore, Md.: The Johns Hopkins University Press, 1979), pp. 131-56; Desmond Ball, Deja Vu: The Return to Counterforce in the Nixon Administration (Los Angeles: California Seminar on Arms Control and Foreign Policy, December 1974); William H. Kincade," A Strategy for All Seasons: Targeting Doctrine and Strategic Arms Control," Bulletin of the Atomic Scientists, Vol. XXXIV, No. 5 (May 1978), pp. 14-20; Colin S. Gray, "Nuclear Strategy: The Case for a Theory of Victory," International Security, Vol. 4, No. 1 (Summer 1979), pp. 54-87; and Colin S. Gray," Targeting Problems for Central War," Naval War College Review, Vol. XXXIII, No. 1 (January-February 1980), pp. 3-21. The academic community, by and large, hasn't ventured into the realm of hypothetic SIOP design.

16. Needless to say, perhaps, a SALT-permitted posture may not be the posture that the U.S. actually develops and maintains.

17. Although there is a certain (even compelling) identifiable strategic logic to the Soviet long-range missile and bomber programs, there are good reasons for doubting whether the U.S. defense community "models" the Soviet SIOP (the so-called "RISOP"--for Red Integrated Single Operational Plan) at all accurately. Of some interest is Joseph D. Douglass, Jr., and Amoretta M. Hoeber, Soviet Strategy for Nuclear War (Stanford, Cal.: Hoover Institution Press, 1979).

18. See Louis Morton, "Japan's Decision for War," in Kent Greenfield, ed., Command Decisions, (Washington, D.C.: USGPO, 1960), pp. 99-124.

19. If deep reductions were to be translated into the level of factory activity, as well as being reflected in on-line, deployed, forces, the disruptive implications for Soviet heavy industry (and higher education) would be of major proportions. Useful overview of important aspects of the Soviet defense-industrial structure include Arthur J. Alexander, Decision-Making in Soviet Weapons Procurement, Adelphi Papers Nos. 147-148 (London: IISS., Winter 1978/9); and Mikhail Agrunsky and Harris Adomeit, "The Soviet Military-Industrial Complex," Survey, Vol. 24, No. 2 (Spring 1979), pp. 106-124. Our judgment as to the scale of disruptive effect which a deep-reductions SALT regime could impose on Soviet industry has been influenced by a number of studies of Soviet R and D and procurement "style" conducted

at Hudson Institute by Norman Friedman. The Soviets could, of course, avoid such disruption simply by maintaining steady production rates (as usual) and warehousing the SALT-prohibited (from on-line deployment) numbers.

20. For reasons well charted in, for example, Richard Pipes, "Militarism and the Soviet State," Daedalus, Vol. 109, No. 4 (Fall 1980), pp. 1-12.

21. See David S. Sullivan, Soviet SALT Deception (Boston, Va.: The Coalition for Peace Through Strength, 1979), p. 7.

22. There may well be a precedent for this military rationale in Soviet General Staff analysis of the net military benefit of the ABM Treaty of 1972.

23. See Amrom H. Katz, Verification and SALT: The State of the Art and the Art of the State (Washington, D.C.: The Heritage Foundation, 1979).

24. Witness Harold Brown, Department of Defense Annual Report, Fiscal Year 1981 (Washington, D.C.: USGPO., January 29, 1980), pp. 82-3. It is one thing to recognize an alien strategic culture, it is quite another to decide just what such recognition should imply for U.S. programs and doctrine.

25. See Ken booth, Strategy and Ethnocentrism (London: Croom, Helm, 1979).

26. Although the idea has surfaced from time to time, in a highly speculative vein, these authors are unaware of any serious expectation looking anywhere in the official arms control community today to the effect that air and civil defense capabilities might be subject to negotiated restraint in SALT.

27. See Harry L. Wrenn, SALT II: Basic Documents (Washington: Congressional Research Service, September 8, 1979), pp. 205-12.

28. See Colin S. Gray, "The SALT II Debate In Context," Survival, Vol. 21, No. 5 (September-October 1979), pp. 202-205.

29. Colin S. Gray, The MX ICBM: Multiple Protective Structure (MPS) Basing and Arms Control, HI-2977-P (Croton-on-Hudson, N.Y.: Hudson Institute, February 1979), p. 14.

30. For persuasive evidence see U.S. Senate, Committee on Foreign Relations, Strategic Arms Limitation Agreement, Hearings, 92nd Cong., 2nd sess. (Washington, D.C.: USGPO, 1972); U.S. Senate, Committee on Foreign Relations, Subcommittee on International Organization and Disarmament, Strategic and Foreign Policy Implications of ABM Systems, Hearings, 91st Cong., 1st sess. (Washington, D.C.: USGPO, May 1969); and John Newhouse, Cold Dawn: The Story of SALT, (New York: Holt, Rinehart and Winston, 1973). More recently, see

U.S. Department of State, Bureau of Public Affairs, The Strategic Arms Limitations Talks, Special Report 46, (Revised) (Washington, D.C.: Department of State Publication, May 1979), p. 2; Harold Brown's testimony before the Senate Foreign Relations Committee on July 9, 1979, reprinted in "Administration Officials Testify on SALT II," Department of State Bulletin, Vol. 79, No. 2030 (September 1979), p. 14; U.S. Arms Control and Disarmament Agency, Arms Control 1978, Publicaton No. 102 (Washington, D.C.: USGPO, May 1979), pp. 7-11; and Paul Warnke's speech of July 25, 1978 in U.S. Department of State, "SALT: Its Contribution to U.S. Security and World Peace," Current Policy, No. 27 (August 1978).

31. See for example, Harold Brown, Department of Defense Annual Report Fiscal Year 1980 (Washington, D.C.: USGPO, January 25, 1979), pp. 13-14, 18, 75-77.

32. For an examination of Soviet declaratory policy see Douglass and Hoeber, Soviet Strategy for Nuclear War; and Leon Goure, et al., The Role of Nuclear Forces in Current Soviet Strategy, (Washington, D.C.: Center for Advanced International Studies, University of Miami, 1974). For an examination of the Soviet force posture see Colin S. Gray, The Future of the Land-Based Missile Force, Adelphi Papers No. 140 (London: IISS, Winter 1977).

33. The Department of Defense Annual Reports for FYs 1980 and 1981 provide rhetorical support for almost every doctrinal persuasion.

34. See Douglass and Hoeber, pp. 1-19; Fritz Ermarth, "Contrasts in American and Soviet Strategic Thought," International Security, Vol. 3, No. 2 (Fall 1978), pp. 138-155; Robert Legvold, "Strategic 'Doctrine' and SALT: Soviet and American Views," Survival, Vol. 11, No. 1 (January-Feburary 1979), pp. 8-13; Peter King, "Two Eyes for a Tooth: The State of Soviet Strategic Doctrine," Survey, Vol. 24, No. 1 (Winter 1979).

35. See V. D. Sokolovskiy, Soviet Military Strategy, 3rd ed., translated and edited by Harriet Fast Scott (New York: Crane, Russak, 1975), pp. 289-296; A. A. Grechko, On Guard for Peace and the Building of Communism, in JPRS, No. 74602 (December 2, 1971) pp. 32,36; Goure, et. al., pp. 16-18; and Leon Goure, War Survival in Soviet Strategy (Washington, D.C.: Center for Advanced International Studies, University of Miami, 1976), pp. 8-10, 47-50.

36. John Erickson, "The Soviet Military System: Doctrine, Technology and Style,: in Erickson and G.J. Feuchtwanger, eds., Soviet Military Power and Performance (Hamden, Conn.: Archon, 1979), p. 28.

37. For example, Secretary of State Vance anticipated that the Soviet Union would accept the March 1977 proposal because its "logic would prove irresistible." Paul Warnke evidently saw SALT as a grand strategic seminar wherein the Soviets could "be educated into the

real world of strategic nuclear weapons." Cited in Richard Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," Commentary, Vol. 64, No. 1 (July 1977), p. 21. Also see, Roman Kolkowicz, "Strategic Parity and Beyond: Soviet Perspectives," World Politics, Vol. 23, No. 3 (April 1971), p. 451; and Raymond Garthoff, "SALT I: An Evaluation," World Politics, Vol. 31, No. 1 (October 1978), pp. 1-25.

38. Andrew Marshall, "Sources of Soviet Power: The Military Potential in the 1980s," Prospects of Soviet Power in the 1980s, Part II, Adelphi Papers No. 152 (London: IISS, Summer 1979), pp. 13-15.

39. See the discussion in Benjamin S. Lambeth, Selective Nuclear Operations and Soviet Strategy, P-5506 (Santa Monica, Cal.: RAND, September 1975), pp. 11-12.

40. Igor Glagolev, "The Soviet Decison-Making Process in Arms Control Negotiations," Orbis, Vol. 21, No. 4 (Winter 1978), p. 768.

41. See for example Colin S. Gray, "A Strategic Symposium: SALT and U.S. Policy," The Washington Quarterly, Vol. 2, No. 1 (Winter 1979), p. 80; Legvold, pp. 9-12; and Benjamin S. Lambeth, The Evolving Soviet Strategic Threat, P-5493 (Santa Monica, Cal.: RAND, August 1975), p.5.

42. For example, Jerome Kahan, "Is U.S.-Soviet Strategy Really Due for a Change?" Washington Post, April 13, 1973; Raymond Garthoff, "SALT and the Soviet Military," Problems of Communism, Vol. 24, No. 1 (January-February 1975), pp.33-34; and Lawrence Freedman, "The Nuclear Deterrent," Navy International, Vol. 85, No. 4 (April 1980), p. 198.

43. See William Van Cleave, "Soviet Doctrine and Strategy: A Developing American View," in Lawrence Whetten, ed., The Future of Soviet Military Power (New York: Crane, Russak, 1976), p. 49; and Charles Murphy, "What We Gave Away at the Moscow Arms Agreements," Fortune (September 1972), p. 114.

44. Fritz Ermarth emphasizes the "military rationalism" of Soviet strategic doctrine and concludes, "[t]he Soviets respect military power and take warfare very seriously. When the propaganda and polemics are pared away, they sometimes wonder if we do. We can make a healthy contribution to our own future, and theirs, by rectifying this uncertainty." Ermath, p. 155. For further discussion of Soviet strategic culture see Stanley Sienkiewicz, "SALT and Soviet Doctrine," International Security, Vol. 2, No. 4 (Spring 1978), p. 84; Glagolev, pp. 768, 770, 799; Bernard Brodie, "The Development of Nuclear Strategy," International Security, Vol. 2, No. 4 (Spring 1978), pp. 67-68; Legvold, pp. 8-10; Benjamin S. Lambeth, "The Sources of Soviet Military Doctrine," in Frank Horton, Anthony Rogerson, and Edward Warner, eds., Comparative Defense Policy

(Baltimore: The Johns Hopkins University Press, 1974), pp. 210-212; Lambeth, How To Think About Soviet Military Doctrine, P-5939 (Santa Monica, Cal.: RAND, February 1978); and Jack Snyder, Soviet Strategic Culture: Implications for Limited Nuclear Options, R-2154-AF (Santa Monica, Cal.: RAND, September 1977).

45. Deep reduction should hold few terrors, for example, for McGeorge Bundy and Robert Jervis. See Bundy, "The Future of Strategic Deterrence," Survival, Vol. XX1, No. 6 (November/December 1979), pp. 268-72; and Jervis, "Why Nuclear Superiority Doesn't Matter," Political Science Quarterly, Vol. 94, No. 4 (Winter 1979-80), pp. 617-33.

46. For detailed elaboration, see Colin S. Gray, U.S. Strategic Forces: A Question of Adequac, , HI-3012-RR (Croton-on-Hudson, New York: Hudson Institute, June 1979).

47. This idea is very ably developed in Edward N. Luttwak, The Political Uses of Sea Power (Baltimore, Md.: The Johns Hopkins University Press, 1974).

48. On the nature of crises and crisis management, see Herman Kahn, On Escalation: Metaphors and Scenarios (New York: Praeger, 1965), passim. While, for a useful recent overview by a long-time student of crisis phenomena, see Carol Bell, "Crisis Diplomacy," in Martin, ed., Strategic Thought in the Nuclear Age, pp. 157-85.

49. It is entirely possible that a Soviet preemptive strike would be timed in so conservative a manner that it would better merit description as a preventive strike.

50. Save for brief periods in the early 1950s and early 1960s, the official U.S. defense community has always, since 1945, believed some variant of the idea that strategic weapons could and should help redress local imbalances.

51. This consideration lies at the root of the authors' dissatisfaction with the strategic flexibility thesis that was advanced publicly so forcefully by James Schlesinger in the mid 1970s. See Keith B. Payne, The Strategic Debate: Three Schools of Thought, HI-3140-DP (Croton-on-Hudson, New York: Hudson Institute, March 1980).

52. This subject is treated in detail in Norman Friedman and Colin S. Gray, Soviet Vulnerabilities and U.S. Strategic Employment Policy, unpublished paper dated December 1978.

53. Soviet thinking on escalation, and its possible control, is the subject of a major study currently underway at Hudson Institute.

54. Nicholas J. Spykman, America's Strategy in World Politics: The United States and the Balance of Power (Hamden, Conn.: Archon, 1970, first pub. 1942), p. 21.

55. See Benjamin S. Lambeth, "The Political Potential of Soviet Equivalence," International Security, Vol. 4, No. 2 (Fall 1979), pp. 22-39. A different perspective may be located in Raymond L. Garthoff, "Soviet Views on the Interrelation of Diplomacy and Military Strategy," Political Science Quarterly, Vol. 94, No. 3 (Fall 1979), pp. 391-405.

56. In his prepared statement in U.S. Senate, Committee on Foreign Relations, The SALT II Treaty, Hearings, Part 3, 96th Cong., 1st sess. (Washington, D.C.: USGPO, 1979), p. 165.

57. See Fred Iklé's testimony in U.S. Senate, Committee on Armed Services, Military Implications of the Treaty on the Limitation of Strategic Offensive Arms and Protocol Thereto, Salt II Treaty, Hearings, Part 3, 96th Cong., 1st sess. (Washington, D.C.: USGPO, 1979), p. 1092. Dr. Iklé affirmed that the U.S. clearly was not more secure in 1979 than it had been in 1969 when the SALT process began. The U.S. defense community should ask itself why this is so (it is not a controversial claim). Such an examination should attempt to identify both those sources of insecurity which may fairly be attributed to the SALT process (or which may be claimed to have been aided and abetted by the SALT processs), and those which may not.

58. Authoritative press reports of the Carter Administration previously reducing planned expenditures in FY 1980 in order to boost the visible percentage increase in the FY 1981 defense budget, however usual a tactic, offer definitive testimony on the degree of urgency with which the many actual or impending imbalances are being approached.

59. Lest there be any misunderstanding, the authors do not attribute the relative U.S. military decline to the SALT process. The fact is that the Vietnam War cost the United States virtually a full generation of military modernization in central systems and in naval and theater systems most pertinent to potential conflict with the USSR. Left and Right in the U.S. defense debate at least are agreed on this.

60. See Kissinger, "The Future of NATO."

61. U.S. Foreign Policy for the 1970s: A New Strategy for Peace (Washington, D.C.: USGPO, 1970), p. 122. The question virtually answers itself.

62. White House Years, p. 217.

63. See Rowen, "The Evolution of Strategic Nuclear Doctrine;" Lynn E. Davis, Limited Nuclear Options: Deterrence and the New American Doctrine, Adelphi Papers No. 121 (London: IISS., Winter 1975-76); and Keith B. Payne, "The Schlesinger Shift: Return to Rationality," in Payne, C. Johnston Conover, and Bruce W. Bennett, Nuclear Strategy: Flexibility and Stability (Santa Monica, Cal.: California Seminar on Arms Control and Foreign Policy, March 1979), pp. 3-48.

64. For example, James Schlesinger, News Conference on January 14, 1974, p. 2.

65. See Colin S. Gray and Keith B. Payne, "Victory Is Possible," Foreign Policy, No. 39 (Summer 1980), pp. 14-27.

66. For example, although he notes the insufficiency of assured destruction "in itself as a strategic doctrine," Secretary of Defense Harold Brown also felt moved to observe that "[w]hat has come to be known as assured destruction is the bedrock of nuclear deterrence, and we will retain such a capacity in the future." Department of Defense Annual Report, FY 1981, p. 65.

67. See Friedman and Gray, Soviet Vulnerabilities and U.S. Strategic Employment Policy.

68. The authors have been told, and certainly are prepared to believe, that the defense analysts who conducted the NUWEP studies which led to NSDM 242 did not think in these terms. Nonetheless, our claim respecting "strategy offsets" is, we believe, an objective characterization of what has occurred.

69. See Schlesinger's truly inspired performance in U.S. Senate, Committee on Foreign Relations, Subcommittee on Arms Control, International Law and Organization, U.S.-U.S.S.R. Strategic Policies, Hearings, 93rd Cong. 2nd sess. (Washington, D.C.: USGPO, March 4, 1974).

70. See Lambeth, Selective Nuclear Operations and Soviet Strategy.

71. Save with respect to the launching of polemical attacks on Western advocacy of such a concept. See Thomas W. Wolfe, The Salt Experience (Cambridge, Mass.: Ballinger, 1979), pp. 162-6.

72. It is worth stressing the distinction between situation and doctrine. The Soviets may recognize a strategic situation wherein restraint would be advisable, even though their doctrine does not endorse such restraint. Similarly, and no less controversial, the Soviets may recognize a situation of mutual societal vulnerability, even though their doctrine does not identify such a situation as being desirable.

73. Department of Defense Annual Report, FY 1981, p. 65.

74. This thesis is developed at length in Colin S. Gray, Strategy and the MX ICBM (Washington, D.C.: The Heritage Foundation, forthcoming 1980).

75. Joseph Douglass has been arguing, for several years, that there is considerable evidence that indicates a strong Soviet desire to capture Western European assets intact (or as intact as proves militarily feasible). These authors have no quarrel with Douglass

on this subject, though they would stress the point that the capture of intact enemy assets would certainly have secondary priority over the need, in the first instance, to wage a war to a successful conclusion. It is improbable that the Soviets would choose to pay an immediate high price in military effectiveness for the long-term benefit of acquiring a very substantial recovery base. We do not argue that there would necessarily be a conflict between war-waging and recovery objectives, only that in the event of such a conflict the choice to be expected is reasonably clear. See Douglass: A Soviet Selective Targeting Strategy Toward Europe (Arlington, Va.: System Planning Corporation, June 1977).

76. To employ William Perry's adequacy criteria cited in David R. Griffiths, "MX Flexibility Allows Doubling Shelters," Aviation Week and Space Technology, Vol. 111, No. 12 (September 17, 1979), p. 16.

77. Harold Brown revealed the continued influence of mutual vulnerability concepts on official thinking, in his statement that the U.S. should avoid strategic damage-limiting capabilities, rather, "[w]e can make certain that we have enough warheads--including those held in reserve-- targeted in such a way that the Soviets could have no expectation of escaping unacceptable damage." See Department of Defense Annual Report Fiscal Year 1979 (Washington, D.C.: USGPO, February 2, 1978), p. 65.

78. For example, see Fred Iklé, "Can Nuclear Deterrence Last Out the Century?" Foreign Affairs, Vol. 51, No. 2 (January 1973), pp. 267-285; and Michael Howard, "The Forgotten Dimensions of Strategy," Foreign Affairs, Vol. 57, No. 5 (Summer 1979), pp. 975-986.

79. Such a notion has transcended heresy to enter the realm of intellectual respectability. See Henry Kissinger's now famous speech in Brussels reprinted in U.S. Congress, "Kissinger Looks at Future of NATO," Congressional Record (Washington, D.C.: USGPO, September 6, 1979), pp. E4291-E4294; and in The Washington Quarterly (see footnote 2 above).

80. This should be painfully obvious, yet U.S. strategic doctrine seems to neglect such an elementary recognition. As Bernard Brodie observed: "Western analysts have paid little attention to the question of how to fight a nuclear war if it occurs." See Brodie, "The Development of Nuclear Strategy," p. 66.

81. James Schlesinger observed that "[i]t is only in circumstances of confrontation and crisis that the credibility of the deterrent comes under test; at that point, what may have seemed like a plausible threat under normal conditions may appear grossly inadequate or inappropriate to the situation at hand... To threaten to blow up all of an opponent's cities, short of an attack on our cities, is hardly an acceptable strategy, and in most cases the credibility of the threat would be close to zero." Annual Defense Department

Report, FY 1976 and FY 1977T (Washington, D.C.: USGPO, February 5, 1975), pp. II-1, II-3.

82. See Congressonal Budget Office, Planning U.S. Strategic Nuclear Forces for the 1980s (Washington, D.C.: USGPO, June 1978), pp. 3, 17; and T. K. Jones and W. Scott Thompson, "Central War and Civil Defense, "Orbis, Vol. 22, No. 3 (Fall 1978), pp. 681-712.

83. The New York Times, January 24, 1979, p. A-13.

84. For the classic presentation of minimum deterrence logic see Alain Enthoven and K. Smith, How Much is Enough? Shaping the Defense Program, 1961-1969 (New York: Harper and Row, 1971), especially chapters 5 and 6.

85. See President Carter's Address to Congress on the SALT II Treaty, June 18, 1979, in U.S. Department of State, SALT II Agreement, No. 12A (Washington, D.C.: USGPO, June 1979), p. 3; and the Address by Secretary of State Cyrus Vance at the University of Wisconsin, July 24, 1979, "Administration Officials Testify on SALT II," Department of State Bulletin, Vol. 79, No. 2030 (September 1979), p. 10. The development of PD-59 apparently has not affected the Carter Administration's position on this point. See Richard Burt, "Muskie Rebuffs Soviet on Nuclear Strategy Criticism," The New York Times, September 17, 1980, p. A-3. Leon Sigal recently restated the rationale for this notion: "..the sheer destructiveness of nuclear war has invalidated any distinction between winning and losing. Thus, it has rendered meaningless the very idea of military strategy as the efficient employment of force to achieve a state's objective." "Rethinking The Unthinkable," Foreign Policy, No. 34 (Spring 1979), p. 39. Soviet analysts view such Western statements as "distorting the essence of war" and reflecting "a profound error." See, for example, "The Ideological Struggle and the Military-Theoretical Front," Voyennaya Mysl, No. 5 (May 1969), Foreign Press Digest No. 0116/69 (December 18, 1969), p. 3; and A. S. Milovidov, ed., The Philosophical Heritage of V.I. Lenin and Problems of Contemporary War (A Soviet View), Soviet Military Thought Series No. 5 (Washington, D.C.: USGPO, 1975), p. 17.

86. See Arms Control and Disarmament Agency, Arms Control 1978, pp. 7-11. This assumes of course that a reduction in SNLVs will effect a parallel reduction in deliverable warheads.

87. Herman Kahn, On Thermonuclear War (Princeton: Princeton University Press, 1960), pp. 139-155. For a more recent elaboration of the U.S. need for a first use policy, see Carl Builder, "Why Not First-Strike Counterforce Capabilities?", Strategic Review, Vol. 7, No. 2 (Spring 1979), pp. 32-39.

88. Kahn, On Thermonuclear War, p. 132.

89. See Douglass and Hoeber, pp. 14-33; and Goure, The Role of Nuclear Forces in Current Soviet Strategy, p. 17. Soviet discussion of such objectives can be found, for example, in S. Ivanov, "Soviet Military Doctrine and Strategy," Voyennaya Mysl, No. 5 (May 1969), Foreign Press Digest No. 0116/69 (December 18, 1969), pp. 42-51; and S. Tyushkevich, "The Methodology for the Correlation of Forces," Voyennaya Mysl, No. 6 (June 1969), Foreign Press Digest No. 0008/70 (January 30, 1970), pp. 26-37.

90. Department of Defense Annual Report, FY 1981, p. 65.

91. Lambeth, "The Sources of Soviet Military Doctrine," p. 205; Legvold, pp. 8-9; and Ermarth, p. 139.

92. It should not be doubted that a serious damage-limitation effort is feasible. See, for example, Boeing Aerospace Company, Industrial Survival and Recovery After Nuclear Attack, A Report to the Joint Committee on Defense Production, U.S. Congress (Seattle, Wash.: The Boeing Aerospace Company, November 18, 1976.

93. For the most thorough official public statement concerning PD-59 see the speech by Harold Brown at the Naval War College, August 20, 1980, in U.S. Department of Defense, News Release, No. 344-80 (August 20, 1980).

94. See Jerome Kahan, Security in the Nuclear Age: Developing U.S. Strategic Arms Policy (Washington, D.C.: The Brookings Institution, 1975), pp. 272-273, 282. This criticism currently is used in attacks against the allegedly "destabilizing" character of MX. See "MX: The Missile We Don't Need," The Defense Monitor, Vol. 8, No. 9 (October 1979), p. 7.

95. See, for example, M. Skirdo, et al., The People, the Army, the Commander (A Soviet View), Soviet Military Thought Series No. 14 (Washington, D.C.: USGPO, 1978), pp. 79-80.

96. See, for example, George Rathjens, "Flexible Response Options," Orbis, Vol. 28, No. 3 (Fall 1974), p. 685; and "The Dynamics of the Arms Race," in Arms Control, Readings from Scientific American (San Francisco: W. H. Freeman, 1973), p. 189.

97. See Marshall, p. 11; and Glagolev, p. 768.

98. For example, Raymond Gastil, "Missile Defense and Strategic Doctrine," in Johan Holst and William Schneider, Jr., eds., Why ABM? Policy Issues in the Missile Defense Controversy (New York: Pergamon Press, 1969), p. 53. President Carter seems to recognize this in defense of his MX decision. See The New York Times, December 13, 1979, p. A-24.

99. See, for example, Herbert Scoville, "Flexible Madness," Foreign Policy, No. 24 (Spring 1974), pp. 175-6.

100. Francis Hoeber, "How Little Is Enough," International Security, Vol. 3, No. 3 (Winter 1978-1979), p. 58.

101. V. Pavlov and A Kasenin, "SALT-2--Its Content and Importance," International Affairs, (Moscow) No. 11 (November 1979), pp. 32-33.

102. Harold Brown, Department of Defense Annual Report, FY 1980, p. 61.

103. Wolfgang Panofsky contends that it is impossible to alter the mutual vulnerability status of U.S-Soviet relations. See "The Mutual Hostage Relationship Between America and Russia," Foreign Affairs, Vol. 51, No. 5 (October 1973), pp. 110-13.

104. Douglass and Hoeber, p. 26-29.

105. A brief presentation of the evidence indicating the possible benefits of civil defense is T.K. Jones and W. Scott Thompson, pp. 682-712.

106. However, the distinction between imposing a penalty on the Soviets, and denying them an advantage may well be significant in view of the apparent Soviet commitment to preemption, and the decisive importance they attribute to the initial phase of central war.

107. The Soviets have reportedly stockpiled at least a thousand ICBMs. See Henry Bradsher, "New U.S. Study Finds More Soviet Missiles," Washington Star (April 12, 1979), p. A-1.

108. Harold Brown, Department of Defense Annual Report, FY 1980, pp. 234-235; Donald Rumsfeld, Annual Defense Department Report Fiscal Year 1978 (Washington, D.C.: USGPO, January 17, 1977), p. 75; and U.S. House of Representatives, Committee on Appropriations, Subcommittee on the Department of Defense, Department of Defense Appropriations for 1980, Hearings, Part 3, 96th Cong., 1st Sess. (Washington, D.C.: USGPO, 1979), pp. 93, 99.

109. For example, if the U.S. were to abandon its land-based missile force unilaterally, or if the Soviet Union could nullify U.S. ICBMs with a fraction of its ICBM force, the additional available warheads could be employed to saturate bomber escape routes. See Congressional Budget Office, The MX Missile and Multiple Protective Structure Basing: Long-Term Budgetary Implications, Budget Issue Paper for Fiscal Year 1980 (Washington, D.C.: USGPO, June 1979), p. 102.

110. For a critical overview of the currently planned horizontal MPS system, see "MX: The Missile We Don't Need," pp. 3-8.

111. The proposed SALT II agreement would permit up to 14 warheads per MIRVed SLBM launcher. The Soviets could deploy 14 RV missiles in the anticipated 20 tube Typhoon SSBN. There is some indication that Typhoon production has begun, and that the Soviets could produce nine boats by the beginning of SALT III without there being a need to decommission any Delta IIIs. See Congressional Budget Office, SALT II and the Costs of Modernizing U.S. Strategic Forces, Staff Working Paper (Washington, D.C.: USGPO, September 1979), pp. 16-17.

112. The U.S. could deploy 9-10,000 shelters by 1989 if necessary. For a discussion of the possibilities for point defense see William A. Davis, "Current Technical Status of U.S. BMD Programs," National Defense, Vol. 64, No. 356 (September-October 1979).

113. A point made in Desmond Ball, "The MX Basing Decision," Survival, Vol. XXII, No. 2 (March/April 1980), 64-5.

114. See William Kincade, "Will MX Backfire?" Foreign Policy, No. 37 (Winter 1979-1980), pp. 43-58.

115. See the testimony of William Perry in Department of Defense Appropriations for 1980, p. 14; and Congressional Budget Office, Planning U.S. Strategic Nuclear Forces for the 1980s, p. 44.

116. According to Admiral Griffiths, the anticipated difference between MX and Trident II hard target SSPK "is not very significant." See his testimony in Department of Defense Appropriations for 1980, p.44.

117. Delivery of Trident SSBNs could be increased greatly, but such a measure would require the opening of another shipyard. See Congressional Budget Office, Planning U.S. Strategic Nuclear Forces for the 1980s, p. 12.

118. See Department of Defense Appropriations for 1980, pp. 43,47.

119. See Francis Hoeber, Slow to Take Offense: Bombers, Cruise Missiles, and Prudent Deterrence (Washington, D.C.: Center for Strategic and International Studies, Georgetown University, February 1977); John Kohout, "A Post B-1 Look at the Manned Strategic Bomber," Air University Review, Vol. 30, No. 5 (July-August 1979), pp.32-33; and John McLucas, "The Case for a Modern Strategic Bomber," AEI Defense Review, Vol. 2, No. 1 (1978), pp. 13-24.

120. Department of Defense Appropriations for 1980, pp. 29, 72.

121. Senate Committee on Armed Services, Military Implications of the Treaty on the Limitation of Strategic Offensive Arms and Protocol Thereto (SALT II Treaty), Hearings, Part 2, pp. 791-802.

122. Department of Defense Appropriations for 1980, p.33.

123. Jeffry Lenovitz, "B-1 Proposed as Core Aircraft," Aviation Week and Space Technology, Vol. 111, No. 12 (September 17, 1979), pp. 14-15; and Robert Ropelewski, "B-1 Studied as Cruise Missile Carrier," Aviation Week and Space Technology, Vol. 111, No. 24 (December 10, 1979), p. 48.

124. U.S. Senate, Committee on Appropriations, Department of Defense Appropriations Fiscal Year 1980, Hearings, Part 1, 96th Cong., 1st sess. (Washington, D.C.: USGPO, 1979), pp. 685-6.

125. Edgar Ulsamer, "In Focus," Air Force Magazine, Vol. 62, No. 10 (October 1979), p. 21.

126. Department of Defense Appropriations for 1980, p. 86.

2. SALT III: STRATEGIC DEFENSE, TNF, AND VERIFICATION ISSUES

2.1 SALT III and Strategic Defense

Although strategic defense tends to receive little attention in the public SALT debate, it has been placed under more comprehensive and detailed limitation in SALT agreements than have offensive forces. The reader is invited to compare the brevity and ambiguity of the SALT I Interim Agreement on offensive force levels with the comprehensive and more detailed ABM Treaty. This discussion of an approach to strategic doctrine and SALT III that would be adequate for U.S. national security policy provides a rational basis for determining how strategic defenses might be addressed in any future SALT III deep force level reductions process.

As discussed above, a U.S. doctrinal orientation that focuses upon damage-limitation and denying a "theory of victory" to the Soviet Union is necessary for the provision of a rational basis for meeting U.S. foreign policy requirements. The U.S. should reserve the freedom to deploy the most effective means of damage-limitation feasible. Offensive counterforce capabilities obviously would be an integral part of U.S. damage-limitation capabilities. However, American leaders could never be certain that the advantage of "taking the initiative" would be theirs even if they were very confident in the disarming potential of American offensive forces (a doubtful prospect indeed). In addition, even if the U.S. could be confident that sufficient strategic warning of impending Soviet attack would always be available so as to permit the U.S. to take the initiative, it could not be certain that the Soviet

Union would not "launch on warning." In short, it seems likely that any serious commitment to damage limitation should include strategic defense.

According to some analyses, U.S. active and passive defenses alone could limit casualties in central war to about twenty million.[1] Such a capability certainly should encourage the Soviets to anticipate a much more resolute U.S. leadership during any process of competitive excalation than would be the case were the U.S. wholly naked to attack. Thus, strategic defense should enhance the U.S. deterrent and thereby reduce the probability of war. In addition, the capability to protect some 100 million Americans who otherwise would be at risk is valuable in and of itself, irrespective of its probable beneficial effect on deterrence stability. The U.S. cannot responsibly continue to ignore feasible defenses as long as it is subject to a severe nuclear threat, and rests its alliance--supportive strategy, ultimately, upon a commitment to initiate strategic nuclear escalation.

Obviously the ABM Treaty, as is, would be a prompt casualty of such an approach to U.S. strategic doctrine and SALT III. However, the specific strategic rationale that justified a severe limitation on BMD at the time of SALT I--the expectation that the Interim Agreement would effectively limit Soviet ICBM throwweight and would be succeeded by even more comprehensive offensive limitations in SALT II--has proved to be ill-founded. Overall, both the general policy arguments and the detailed technical charges deployed against BMD in the period 1969-1972 are not relevant to the strategic milieu and BMD technology scheduled to mature in the 1980s.[2]

There could be some tradeoffs inherent in allowing a free rein to U.S. and Soviet strategic defense. (Although extraordinarily obvious, it should be recalled that when referring to a "free rein" for strategic defense, the only de jure difference between such a situation and the current arms control regime involves BMD. However, at least in the U.S., the standard argument against a serious air defense of CONUS is to the effect that if there is no defense against ballistic missiles why should significant resources be allocated in order to defend against the "incremental" bomber threat?[3] As such, "unleashing" BMD should have significant implications for the de facto state of all U.S. strategic defense.) The effect of renegotiating or abrogating the ABM Treaty could be, and probably would be, to encourage Soviet deployment of BMD. The significance of that probable result must be viewed in the context of its effect upon the feasibility of a U.S. denial of victory deterrent posture. The prospect of Soviet BMD deployment should not automatically be considered sufficiently threatening to require continued limitation on U.S. BMD in order to forestall Soviet deployment. Assuming that the U.S. is not overtaken by a Soviet strategically revolutionary technological development (such as space-based HEL BMD), the worst-case that could be expected from unrestricted U.S. and Soviet exploitation of active defense would be a Soviet capability to deny the U.S. some attractive target sets. However, as long as the U.S. can limit damage to its homeland significantly, and can enforce upon the Soviets comparably difficult offensive penetration problems, the integrity of the DOV deterrent should remain intact. The basis for this confident judgement rests upon the assumption that the Soviet Union has particular political

vulnerabilities that do not burden the U.S. The Soviet Union should anticipate disastrous domestic political consequences in any excursion into an extremely destructive and unwinnable war--while the U.S. (particularly with this Soviet vulnerability in mind) could with relative confidence in its political integrity engage in a war that while perhaps militarily unpromising in the short term, would envisage the eventual attainment of the desired political objective.

Soviet strategic defenses capable of denying (or raising the entry price to a prohibitive level) the U.S. a particularly attractive target set should be considered a worst-case assessment. Without a doubt, the U.S. has the capability, though possibly not the determination, to outclass the Soviet Union in both offensive and defensive strategic capabilities. That obviously could not be accomplished overnight; however, within the context of a SALT III regime characterized by deep force level reductions and essentially unrestrained strategic defensive forces, the U.S. should be capable of attaining a DOV deterrent posture: that would not appear to be feasible without the benefit of a free rein on strategic defenses. A commitment to damage-limitation: should have a positive effect upon the credibility of the U.S. deterrent, and the probable resultant Soviet BMD deployment should not prove to be an insuperable obstacle to the feasibility of a denial of victory-oriented U.S. strategic doctrine.

2.2 Salt III: Allied Strategic and Theater Nuclear Forces

There are critical issues concerning the relationship between a SALT III regime characterized by deep force level reductions and the modernization of U.S. and allied theater nuclear weapons (TNF). As elaborated above, a U.S. DOV-oriented approach to a strategic nuclear doctrine and SALT III should enhance the credibility of the American commitment to engage in strategic nuclear escalation on behalf of European allies. Deep force level reductions need not formalize the erosion of the U.S. strategic nuclear guarantee to NATO Europe.

On December 12, 1979 NATO Defense and Foreign Ministers agreed to modernize NATO TNF. The primary declared justification for NATO TNF modernization is to ensure that in an era of strategic "parity" Soviet leaders could not anticipate using TNF without triggering nuclear retaliation against East Europe and possibly the Soviet homeland.[4] NATO TNF modernization is declared to be a requirement for the maintenance of a "continuum of deterrence" in a period of strategic parity wherein the threat of U.S. strategic retaliation could be perceived by Soviet leaders as incredible.

In addition, Soviet TNF employment policy appears to envisage preventive or preemptive strikes by long-range systems on the entire depth of NATO deployment-- with particular attention paid to the destruction of NATO's nuclear assets. As retired French General Pierre Gallois observed recently, "....what seems to me very impressive is that such a doctrine has its ideal weapon with the SS-20 now being deployed on Russian territory."[5] NATO TNF modernization which would deny the Soviet Union any realistic anticipation of executing a successful preemptive

strike should enhance the Western "deterrence continuum" even in the context of an American DOV-oriented deterrent posture. NATO TNF modernization should not be viewed as inconsistent with a credible American strategic guarantee to Europe. Some analysts have opposed long-range TNF modernization on the grounds that it would inspire a Soviet perception of a "decoupling" of the U.S. strategic commitment to NATO: not without some logical justification it is believed that the concept of a "Eurostrategic balance"[6] is erosive of the very fundamentals of NATO's deterrence doctrine. However, whether the U.S. rationally can extend its strategic deterrent depends, in good part (though certainly not exclusively), upon the character of the U.S. strategic force posture; if the U.S. strategic posture is such that the extended deterrent guarantee cannot be taken seriously, then the U.S. strategic deterrent is in effect "decoupled" from Europe. Avoiding NATO TNF modernization certainly cannot ameliorate the decoupling effect of an incredible U.S. extended deterrent. Correspondingly, a credible U.S. strategic commitment to NATO, such as should be the result of a DOV deterrent posture, should not be affected negatively by TNF modernization. Rather, to the extent that nuclear assets in the theater of operations will appear more likely to be used than those based in the homeland of a far distant ally, TNF modernization by NATO could indeed enhance a continuum of deterrence even in the context of a credible U.S. extended deterrent.

Generally it is considered probable that deep force level reductions of Soviet and American central strategic systems would enhance the significance of TNF because of the relative decline in central strategic capabilities.[7] In the context of deep force level reductions and NATO

TNF (and allied strategic-nuclear-force) modernization one might anticipate the Soviet Union paying greater attention to limitations on TNF, and devoting more resources to the provision of active defenses against such systems (air defense and ATBM defense). A greater emphasis upon active defense would be a logical development as offensive forces become both severely limited and highly survivable. Because NATO's long-range TNF and allied strategic forces could carry out some (severely restricted) strategic missions it would seem particularly appropriate for the Soviets to emphasize active defense against those forces in the context of SALT III deep force level reductions. Throughout the SALT process the Soviets have stressed the importance of limiting NATO TNF as a corollary to limitations on central strategic systems. The Soviet determination of what constitutes a "strategic" weapon (and therefore should be subject to SALT limitations) holds generally that a system capable of delivering ordnance on the homeland of either superpower is "strategic." Thus, U.S. TNF deployed in forward bases such as land-based F-111As and carrier strike aircraft are considered strategic, while Soviet MIRVed SS-20 IRBM launchers are not so classified. The U.S. has consistently rejected the Soviet definition of what constitutes a strategic weapon, and similarly (ergo) has rejected Soviet demands for the inclusion of so-called forward based systems (FBS) or allied strategic forces within SALT limits. Consistent with the Soviet definition of what is strategic, they have characterized the December 12 decision for NATO TNF modernization as an attempt to "circumvent" SALT II limitations.[8]

The Soviet Union has indicated that the equal aggregate SNLV ceilings negotiated at Vladovostok and reflected in SALT II are acceptable despite the exclusion of theater and allied nuclear forces, only because of the high level of SNLVs permitted. However, it is the formal Soviet position that future more substantial SALT limitations would require concomitant limits on some NATO theater systems (and British and French strategic forces).[9] The Soviet Union should be expected to agree to SALT III deep force level reductions only if such an agreement addresses Soviet concerns regarding NATO and allied independent nuclear assets (either directly, or by means of some compensating "side payment"). What may be termed "the geopolitics of SALT" will be particularly troublesome in any SALT III negotiating process which attempts to grapple with deep-strike (in-theater deployed) systems. In principle, at least, the Soviets clearly have a case: they could be targeted at home by Western-Europe deployed so-called theater-nuclear strike systems, and by the long-range nuclear forces of Britain, France and China. On the other hand, the United States has an unassailable case for arguing that the NATO Alliance comprises but one, single slate of assets, and that an SS-20 targeted on Rotterdam is the functional equivalent of an SS-17 targeted on Detroit. These authors believe that the predictable problems that will attend discussion of FBS and Soviet deep-strike systems in a SALT III framework have been implicit in the SALT enterprise from the very beginning. Given the extended deterrent duties of U.S. strategic forces, and the very different geopolitical contexts of the rival military blocs, it was never sensible (which is not to deny that

it was convenient) to single out so-called "central systems" for separate arms control attention.

The U.S. has declared itself to be prepared to negotiate limitations on TNF within the framework of SALT III. As Secretary of Defense Brown states in the Department of Defense Annual Report, Fiscal Year 1981, "...we and our NATO allies have agreed on the outlines of an arms control approach to the Soviets on long-range theater nuclear forces in the context of SALT III."[10] At the December 12, 1979, meeting of NATO Foreign and Defense Ministers five principles were established as the basis for the U.S. position regarding limitations on TNF:[11]

- Any limitations on U.S. TNF should be accompanied by appropriate limitations on Soviet TNF.
- Limitations on U.S. and Soviet long-range TNF should be negotiated within a bilateral SALT II framework in a step-by-step approach.
- Agreed limitations on U.S. and Soviet land-based, long-range TNF should be the immmediate objective of the negotiations.
- Limitations must be established upon the principle of de jure equality in both ceilings and rights.
- Any agreement must be adequately verifiable.

In some contrast to the realm of strategic nuclear forces the U.S. appears to be thinking strategically about the role of its prospective TNF. Harold Brown has observed that U.S. TNF must enable the U.S. "..to counter the SS-20s and Backfires from the theater, and place at risk Pact forces and assets deep in Eastern Europe and the western military districts of the U.S.S.R."[12] (However, the only ways "to

counter" the SS-20 would be through strikes by deep penetration of aircraft and/or by an ATBM defense). Army Secretary Clifford Alexander has observed that the Pershing II target-set could include hard and soft missile sites, airfields, naval bases, command and control centers, and dams and locks.[13] Thus, in addressing the issue of the potential implications of SALT III deep force level reductions for TNF there exist some probable basic paramters. First, the Soviet Union undoubtedly will require limitations on long-range NATO TNF before agreeing to severe reductions on central strategic systems. The Soviets are not likely to endorse any de facto NATO TNF equality because of the possibility that NATO TNF could perform "strategic" missions, and because they will require "compensation" for independent British and French forces. Second, the U.S. and NATO are willing to negotiate TNF limitations within the context of SALT III, but only in accord with the principle of equality. Finally, there exist some strategic guidelines vis à vis the anticipated functions of modernized NATO TNF, and thus some rational basis exists for determining how TNF limitations should be approached within the context of SALT III. Deep force level reductions and collateral limitations on TNF should not inhibit NATO's capability to attack high-value strategic assets deep in Eastern Europe or in the Western military districts of the Soviet Union.

The optimal U.S. approach to SALT III as characterized in this study could place some severe performance requirements on NATO TNF and therefore could have significant R & D and weapon acquisition implications for NATO. An arms control regime that emphasizes deep reductions on offensive SNLVs and a freedom for both the U.S. and the Soviet Union

to exploit all means of active defense could entail the necessity for NATO TNF to penetrate heavy Soviet active defenses (possibly including BMD). For example, in the context of severe limitations on offensive force levels the Soviets would have major incentives to expand their air defense capability against the U.S. strategic cruise missile threat. A possible result would be to degrade seriously the prospect of success for smaller cruise missile strikes. If limited to low launcher ceilings, the capability of NATO cruise missiles independently to penetrate to high-value, terminally defended Soviet targets could become highly questionable. The Soviet SA-10 SAM with altitude coverage from very low level to 15,000 feet and active terminal radar guidance is expected to be operational this year, and will likely have a better than modest capability to intercept U.S. ALCMs.[14] In addition, the Soviets are now developing an improved AWACs aircraft, as well as a new interceptor aircraft that should have an impressive look-down/shoot-down capability, and will be armed with an advanced air-to-air missile (the AA-X-9) which appears to be configured to attack ALCM carriers. Each of these developments would be significant in the Soviet effort to defend against cruise missile attacks.[15] As William Perry, Under Secretary of Defense for Research and Engineering has observed, by the late 1980s the Soviet Union could begin deployment of the air defense systems capable of defending even against mass cruise missile attack.[16] Thus, to the extent that SALT III deep force level reductions will compel a greater Soviet interest in active defense, it should have significant implications for the role of cruise missiles in NATO's TNF modernization program.

In addition, the 108 non-MIRVed Pershing II launchers proposed for NATO deployment may not represent sufficient warheads (especially after possible SALT III reductions) to saturate the Soviet terminal defense that might be expected to result from the deep force level reduction regime described above. If NATO's long-range TNF are to be limited by launcher ceilings, it would probably be most advantageous to exploit MIRV (and possibly MARV technology) as a means of ensuring the penetration of heavy Soviet active defenses. The U.S. must be certain that the collateral TNF limitations of SALT III allow NATO to deploy a sufficient number of cruise missile and Pershing II launchers so as to overcome much enhanced Soviet active defense. Some of the more obvious requirements for NATO TNF would remain unchanged: great attention must be paid to pre-launch survivability; while in order to attack targets in the Western military districts of the Soviet Union (and perhaps Murmansk and Black Sea ports) yet to attempt to provide the Soviets with robust incentives for the exercise of discretion in targeting, NATO TNF must be capable of "discrete" strikes emphasizing great selectivity and a minimization of undesired collateral damage.

TNF systems characterized by high degrees of pre-launch and penetration survivability (in the context of much augmented Soviet active defenses) should provide at least the bare postural bones for the deterrence continuum sought by NATO. However, in the context of an anticipated continuing Soviet commitment to a damage-limitation capability, NATO TNF modernization may well be insufficient. The deployment of more than 120 SS-20 launchers (plus "reload" missiles) and 100 Tu-22M Backfire B aircraft to Long-Range Aviation, has made it painfully apparent that

NATO-Europe will face enormous dangers should it endorse military action on the deterrence (or escalation) continuum. Indeed, the political integrity of NATO could well be placed at immediate risk quite early in a European armed conflict. As Fred Iklé has observed with a logic which is as impeccable as it would be politically disruptive: "The overriding objective for every politically responsible government during an acute crisis would be to minimize nuclear destruction to the homeland."[17] If the minimization of potential nuclear destruction appeared to be feasible only through some form of conciliation, it should be no great surprise if that option were to be exercised (or, at least attempted). Severe reduction in the U.S. strategic weapon inventory, and collateral limitions on NATO's TNF arsenal, combined with very serious Soviet damage-limitation programs might well reduce markedly Soviet disincentives to employ nuclear weapons in a war in Europe. The political integrity of NATO, as a coalition, would come under very severe strain in such a situation. Even without being employed in action, the very existence of SS-20 IRBMs and Backfire bombers, in combination with extensive active defenses, could have terminal political implications for the integrity of the Western Alliance--notwithstanding the modernization of NATO's TNF arsenal. To address this potentially serious vulnerability, NATO's active defenses should be modernized in tandem with its TNF assets. The technical problems of Anti-tactical Ballistic Missile Defense (ATBM) are in some very important respects less formidable than those associated with defense against intercontinental ballistic missiles, and an effective system--a spinoff from the Low Altitude Defense System (LoADS)--may well be feasible.[18] Indeed, the principal

difficulties confronting ATBM defenses for NATO-Europe in the 1980s may well be political rather than technical.

The U.S. should not expect the Soviet Union to accept severe central-system reductions without concomitant limitations being placed on NATO's deep-strike TNF. Moreover, those TNF limitations may have to be asymmetrical in the Soviet favor, if they are to be "negotiable," notwithstanding NATO's Joint Communique of December, 12, 1979, which specified de jure equality as a principle for negotiating TNF limitations. In negotiating TNF limitations the U.S. must consider the likely stimulating effect deep force level reductions could (and almost certainly would) have upon Soviet active defenses. NATO's TNF posture will have to be very survivable--pre-launch and in penetration (as would be necessary with or without SALT III). In addition, that posture could be faced with the task of penetrating a Soviet BMD system as well as very formidable air defenses. Thus, any deep-strike TNF launcher ceilings negotiated by the U.S./NATO should take into consideration the prospect of enhanced Soviet active defenses. In addition, multiple warheads might be appropriate for NATO IRBM and/or cruise missiles. Also, in the context of a very serious Soviet commitment to active defense, augmented NATO air defense and ATBM could provide the defensive capability necessary to ensure the political integrity of the alliance in time of crisis.

Deep force level reductions will also affect the strategic nuclear forces of the United Kingdom, France, and China. Generally it is reasoned that severe reductions in U.S. and Soviet offensive force levels would make the very limited capability of Third countries more significant by narrowing significantly the disparity between superpower and Third

country strategic capabilities.[19] Indeed, deep force level reductions might even provide an incentive for Third countries to augment and modernize their arsenals in competitive pursuit of U.S. and Soviet capabilities. Under a severe SALT III regime, Third country issues could assume unprecedented importance for the U.S. and the Soviet Union. The Soviet Union would be particularly concerned with enhanced British, French, and Chinese strategic capabilities. Because deep force level reductions could increase the vulnerability of the superpowers, (and the Soviet Union in particular) to states not previously of major strategic concern, it should be expected that the Soviets will show great hesitancy to entering into an arms control regime that does not include Third country forces (or does not contain an "escalator" clause that would license additional superpower capability by way of compensation for Third party force increases).

The very probable Soviet requirement that British and French forces be included in some rigorous fashion in a severe SALT III regime, could be one of the more significant factors mitigating against successful deep force level reductions. (The obvious complication of how Chinese forces might enter the picture makes any SALT III-Third country linkage even more complex.) The French have rejected the notion of formally acknowledging any SALT constraints--though what the Soviet Union, the United States (and the British) might choose to negotiate so as to make due allowance for French capability is another matter. Considered overall, British and French strategic force inventories are too small (and are likely to remain too small) to provide a sufficient margin for negotiation. A relatively small percentile reduction in British

or French launchers could effect the credibility of a retaliatory threat significantly. (In the British case, an "independent" strategic posture comprising four SSBNs is almost uniquely ill-suited to any reduction. That force happens to consist of four boatloads of 16 SLBMs--and is barely usable at that.)[20] In addition, the prospect of U.S. and Soviet deep force level reductions could well be the stimulant for increased British or French forces, not the point of departure for any great incentive to limit capabilities. A means of indirectly accomodating Soviet demands for the inclusion of Third country forces would be for the U.S. to "compensate" for Brish and French forces by agreeing to asymmetrical launcher ceilings in favor of the Soviet Union (the Soviets have already suggested such a procedure in Minister Semenov's Unilateral Statement of May 17, 1972). Compensating for allied forces by agreeing to asymmetrical force levels, whether in theater or central nuclear systems, would not necessarily be of great strategic significance (although it certainly could be), but it would probably be politically unacceptable for the U.S. and/or for NATO. Public Law 92-448 of September 30, 1972 (which includes the Jackson Amendment) set the course for the precedent established at Vladivostok for equal aggregate launcher ceilings. The U.S. can hardly be expected to compensate the Soviet Union with asymmetrical ceilings for allied forces over which it does not exercise control. In addition, as discussed above, one of the negotiating directives issued at the NATO December 12, 1979 meeting of Foreign and Defense Ministers regarding future TNF limitations in SALT III stated that, "[a]ny agreed limitations on these systems must be consistent with the principle of equality between the sides. Therefore, the limitations

should take the form of de jure equality both in ceilings and in rights." Thus, it appears that the existence of Third country strategic nuclear forces, and the differing geographical situation of the U.S. and Soviet Union might render a SALT III deep force level reduction regime infeasible.

A SALT III regime consistent with denial of victory guidelines could provide the superpowers with a means of managing deep force level reductions without rendering themselves intolerably vulnerable to Third countries not previously of major strategic concern. A SALT III regime which severely limited strategic offensive launchers, but permitted unrestrained exploitation of strategic defenses, should encourage U.S. and Soviet leaders to enter into deep force level reductions irrespective of the circumstances surrounding Third country strategic nuclear forces. Indeed, it would seem likely that an arms control agreement permitting the superpowers to exploit BMD and ATBM would (or should) appeal to the Soviets in light of NATO TNF modernization, and expected French and British strategic force modernization. For example, the British appear to be interested in acquiring the Trident C-4 SLBM as a replacement for the aging Polaris A-3 (although tipped with British warheads), and the French are in the process of deploying a fifth SSBN and the construction of a sixth has already begun. In addition, President Giscard d'Estaing soon will decide whether or not to deploy the new land mobile SX IRBM. Nevertheless, Third-countries probably could not hope to engage in an offensive-defensive competition with the Soviet Union, thereby offering the superpowers a means of entering into a severe SALT III regime without rendering themselves increasingly and intolerably vulnerable to Third country forces. As our colleague Herman

Kahn argues, it may well be the case that--in the late 1980s and beyond--the strategic difference between super and other major powers will reside in the quality and quantity of active defenses, not (so much) of offensive forces. It may be a moot point whether or not the super powers, if equally committed to the defense and to the offense, would be able to limit damage to their homelands on a major scale in the event of a Soviet-American central war. However, there is no good reason to question the ability of the super powers to enforce country-wide ballistic missile "keep out" zones vis à vis Third parties, prospectively for ever.

Obviously, an increased Soviet emphasis on active defense, especially BMD, would have significant implications for Third countries desirous of maintaining "independent" nuclear deterrents. This was recognized by the British during SALT I negotiations. Evidently they made their position very clear "at high levels" to the effect that the degree of ABM deployment permitted by the ABM Treaty should be sufficiently low as to ensure the capability of British Polaris A-3 warheads to penetrate Moscow defenses without high modernization costs.[21] The ABM treaty virtually removed a potentially significant means of degrading the penetrability of relatively small numbers of SLBM warheads. That the current British deterrent is to a large degree dependent upon continuation of the ABM treaty is widely recognized.[22] In order to maintain an SLBM deterrent capability that was not wholly incredible in the context of deep force level reductions (and renewed and reinvigorated active defensive programs), the British and French could well be forced

to exploit MIRV technology, and/or to reassess the degree of integration (if any) of their target planning with the U.S. SIOP.

In addition, deep force level reductions accompanied by an even greater than extant Soviet interest in active defense could foreclose the possibility of Third countries deploying relatively small numbers of cruise missiles that would be capable of penetrating Soviet air defenses independently. As discussed above, the Soviets appear to be deploying air defense systems that could be appropriate for meeting the U.S. ALCM threat by the late 1980s. The U.S. currently is preparing advanced technology ALCMs with a proposed IOC of 1987 to maintain an advantage over Soviet air defense. However, without direct assistance from the U.S. it is highly questionable whether France or the U.K., independently or together, could maintain the penetrability of any cruise missiles that they might deploy. Both the British and the French appear to recognize this problem in consideration of their respective strategic force modernization problems.[23] The role the U.S. might play in assisting the British and French would probably be affected by a non-circumvention clause that the Soviets undoubtedly would require in a deep force level reductions regime, and by the degree to which the British and particularly the French would allow themselves to become dependent upon the U.S. for the viability of their deterrents. (However, it has to be admitted that the British made their decision, to accept dependence, with the Norman Agreement by which they were permitted to acquire Polaris).[24]

If the British and French could maintain the capability to penetrate Soviet active defenses, a somewhat novel and perhaps more stable

Soviet-Western deterrence relationship might be established in the context of deep force level reductions, and an arms control regime which would formalize a significant measure of TNF equality. In principle one can conceive of a parallel with Grand Admiral Tirpitz's "risk theory" vis à vis the British Navy.[25] It would be highly desirable were British and French strategic forces of such a character and quantity that the Soviet Union would be compelled to employ so much of its strategic capability in an attack against them that it would, as a consequence, give a significant margin of strategic superiority to the United States. If this were a plausible scenario, the Soviets themselves would forge the "coupling" of the U.S. strategic nuclear deterrent to NATO Europe by the very act of striking British and French strategic forces. A "not-incredible" U.S. threat to use strategic nuclear forces on behalf of allies would certainly provide the essential ingredient for such a "risk theory" of deterrence. Unfortunately, allied strategic forces, though undoubtedly troublesome to Soviet war planners, are not of a kind at all likely to absorb noteworthy quantities of Soviet strategic-forces payload.

However, an increased Soviet commitment to active defense, and particularly terminal defense of high-value strategic assets, could introduce (or rather could aggravate) tension between U.S. and allied concepts of deterrence and targeting philosophies. With very limited forces, the British and French are compelled to focus exclusively upon U/I and political/cultural symbolic targets. British declaratory policy is quite explicit on this point.[26] Serious Soviet BMD, as one might anticipate in a deep force level reduction arms control regime, could

ensure that the British and French deterrents, as independent forces, would continue to be oriented exclusively as countevalue threats. As Admiral of the Fleet Lord Hill-Norton has observed, "[b]ut for an insurance or for a national deterrent, the need to inflict unacceptable damage is paramount to its credibility. With a force of limited size, this obviously cannot be a counterforce capability against Russian missile-launching sites. It must at least involve a number of major industrial centres, and may very well require an ability to penetrate the defences of Moscow itself."[27] (It has always been the British position that the British independent deterrent, operating alone, has to be able to destroy Moscow--that capability has long been identified as the touchstone of an adequate national deterrent.) Allied targeting practices oriented as they have to be toward city-busting, could be extremely dysfunctional vis à vis a U.S. DOV-oriented strategic doctrine. A Soviet drive westward, in theory, could result in French and/or British leaders threatening to destroy Soviet urban and industrial assets while the U.S. would be interested in maintaining those targets intact for intra-war bargaining purposes. The variety of the aggregate Western threat could provide an effective pre-war deterrent, but the anticipated employment policies governing the use of allied "independent" strategic forces could mightily unhinge the prospects for orderly conflict management as viewed from Washington and Omaha.

An increased Soviet commitment to active defenses of all kinds, particularly if reflected in a major BMD program, could have the effect of putting the British and French "independent" deterrents out of business. That may not necessarily be a wholly negative result. A U.S. denial

of victory-oriented strategic posture, capable of revitalizing the U.S. commitment to initiate and if need be sustain strategic escalation on behalf of allies, in combination with damage-limitation capabilities in NATO-Europe could make deep force level reductions and the anticipated related expansion of Soviet active defenses a less bitter pill for the Europeans to swallow.

2.3 SALT III and Verification

Deep force level reductions would introduce an increased severity to the problem of adequate verification. In the context of deep cuts in offensive force levels the effect on the strategic balance of even relatively limited non-compliance could be significant. Rapid deployment of weapons not adequately identified during development, or rapid exploitation of a technological breakthrough, also might effect a significant shift in the strategic balance during a severe SALT III regime. Two *de facto* standards of verification adequacy have been referred to in the extensive debate regarding SALT verification: any non-compliance on a scale that could affect the strategic balance must be detectable; and that detection must be sufficiently timely as to allow for an appropriate response. Deep force level reductions could well render infeasible such logical standards of verification adequacy.

Severe reductions in offensive force levels could make even limited non-compliance more significant than would be the case at very high levels of SNLVs. The potentially much greater significance of limited non-compliance probably has to increase the incentives for deception. As the potential rewards for cheating increase, evasion of a SALT III treaty would appear to become more attractive. Unfortunately, precisely when non-compliance could become more significant it may also become increasingly technically feasible. Theoretically, the Soviets would weigh the probability *and cost* of detection against the potential value of non-compliance in any decision regarding treaty violation. An adequate verification capability should deter violations through the anticipation of detection. However, the major dilemma of SALT III verification

is that it will not be possible to monitor many of the factors that could be very significant to the strategic milieu of the 1980s: that is to say, what is most significant may not be verifiable. Hence, the incentives for treaty violation, if that treaty addresses significant but non-verifiable strategic factors, could be very great. If the treaty does not include many or most of the strategically most important variables, which would reduce the danger that could arise in a violation context, then necessarily it will be a less significant instrument.

Assuming that "national technical means" (NTM) of verification remain the sole currency of SALT-related monitoring capabilities (the Soviet position regarding on-site inspection has been that it would be acceptable only after all great powers have accepted complete disarmament: i.e., on-site inspection is not acceptable to the Soviet Union), weapon characteristics verifiable during a SALT III regime generally will be those associated with large physical dimensions, distinctive operational practices, or a few unique construction sites. For example, the number of silo launchers and heavy silo launchers, new silo construction, ICBM tests, and SSBN construction are detectable with high confidence.[28] However, many factors particularly significant to the strategic balance in the context of deep force level reductions could not be verified.

Amrom Katz has observed as follows:

> As early as SALT I we knew and stated that we couldn't count Soviet missiles, so there was little point in limiting missiles; we concentrated, instead, on fixed ICBM launchers. At that time these were undergound silos which, being conspicuous, long in building, and presumed (by both sides) to be detectable, identifiable, and hence targetable, were thick-walled concrete structures. These characteristics made such launchers detectable and countable and hence verifiable via the use of National Technical Means; therefore numerical limitations on them

could be incorporated in a treaty. But ICBM launchers don't have to be detectable."[29] (Emphasis added)

The principle established in SALT that the capability to detect ICBM silo launchers is the functional equivalent of counting on-line ICBMs, and therefore is adequate for determining strategically significant land-based missile capability is not necessarily true. ICBMs do not have to be launched from obvious hardened underground silos; there are a number of ways ICBMs could be launched from covert positions.[30] Lacking the liberty of on-site inspection (and perhaps even with that liberty) the U.S. cannot determine the number of ICBMs the Soviets have produced and stored; which could be deployed to covert positions, or to non-covert positions in a rapid treaty "breakout" mode. Whereas some analysts have been able to argue in the context of previous high SALT launcher ceilings that the degree of non-compliance possible without detection would not be strategically significant,[31] (the figure of 100 covert launchers often is used) in the context of severe SALT III reductions that argument could be of dubious integrity. Severe offensive force level reductions could, in effect, greatly increase the importance of each SNLV. Even limited deception therefore could be very significant.

Clearly, the degree of non-compliance considered significant must depend to a great extent upon the theory of deterrence that provides political and strategic meaning to different values of strategic "balance." For example, if strategic forces are considered balanced so long as the U.S. force posture is capable of retaliation against some particular fraction of Soviet urban and industrial targets, then the task of adequate verification may be relaxed. It would appear to require non-compliance,

a "breakout" capability, and/or a technological breakthrough of heroic dimensions for the Soviets to attain a wholly disarming first- strike capability. However, the simple concept of retaliation against urban and industrial targets is not an appropriate basis for deterrence theory, U.S. strategic doctrine, or SALT III negotiations. If one is extremely interested in relative war-waging capabilities, then a degree of deception vis à vis SALT III that might be considered insignificant in the perspective of an elementary "assured vulnerability" idea could be of grave concern. This would seem to be particularly true during a severe arms control regime wherein relatively small numbers of covert SNLVs could have an impact upon the strategic balance.

Several factors are capable of aggravating the problem of SALT verification. Deep force level reductions, and an adequate U.S. strategic doctrine would appear to require relatively exacting verification capabilities precisely when strategically significant forces are becoming more diversified and inherently more difficult to monitor. What the situation would seem to demand is a means of rendering relatively insignificant limited non-compliance and weapons that cannot be monitored closely, as may have been the case in the context of high force levels and an assured vulnerability-oriented U.S. doctrine.

Such a solution may be infeasible, and the lack of adequate verification capabilities could make a severe arms control regime politically impossible and strategically unsound. Not only are certain quantitative factors impossible to monitor by NTM, qualitative factors of great significance may pose an even greater problem. For example, NTM cannot directly distinquish MIRVed from non-MIRVed launchers, nor the replacement

of non-MIRVed by MIRVed missiles.[32] In addition, it is not possible to verify the number of warheads a missile is carrying, while an ICBM could be deployed with more than the tested number of warheads. (The SS-18 for example, has been tested to 12-14 warhead "stops" but is capable of fractionating its payload up to a level of 20-30 warheads). Of particular concern to the U.S. could be Soviet deployment (or "warehousing") of the mobile SS-16 ICBM system. Neither the location nor the numbers of the SS-16 can be verified.[33] The problem of monitoring mobile land-based systems could become very important if, as seems distinctly possible, the development of a U.S. hard-target kill capability drives the Soviets in that direction.

Another particular concern of the U.S. will be the growth potential inherent in the SS-20 IRBM. As is well-known, the SS-20 is a two-stage version of the (non-deployed though probably stored) SS-16 ICBM. Through the addition of a first stage to the SS-20, it can be converted into an SS-16; or, the removal of some warhead payload from the SS-20 could also give it intercontinental range. Because the SS-20 system is garage-deployed with a true mobility option, such reconversion procedures could be done covertly.[34] Some analysts argue that the Soviets would not convert SS-20s for deployment without extensive testing which could be monitored.[35] However, as Robert Perry observes, both super powers have deployed operational missiles which have not been fully tested, and although testing a missile at full range would be desirable "..it is not essential to individual tests of key sub-systems nor to their successful integration,"[36]

Finally, according to William Perry, the Soviet Union is proceeding with the development of long-range cruise missiles, possibly for deployment on the anticipated new strategic bomber expected to replace the aging Bison and Bear fleets.[37] Cruise missiles are a "grey area" weapon system par excellence. Because cruise missiles are relatively small and of modular construction, it may be virtually impossible to count them, or even to verify their existence in the Soviet context. The range of a cruise missile cannot be verified with any precision nor can the charcteristics of its warhead. Thus the more important features of a cruise missile force may be extremely difficult to monitor.[38]

In short, the strategic milieu of the 1980s would not appear to be conducive to the strict requirements for verification adequacy that would accompany deep force level reductions. The issue of verification could pose an insoluble problem for any prospective severe reductions arms control regime.

It may well be that because of the verification problem, and the sensitivity of the strategic balance to limited deception in a severe reductions arms control regime, the only means of managing deep force level reductions will be to permit active missile defense. Active air and missile defense, such as would be appropriate for a denial of victory-oriented American strategic doctrine, could in effect render the U.S. less vulnerable to Soviet covert non-compliance or surge deployment of SNLVs.[39] In addition, a serious U.S. commitment to active defense should tend to discourage Soviet non-compliance by reducing the prospective operational return from deception. In short, the exploitation of active missile and air defense technologies could provide a means to manage

severe SNLV reductions without rendering the U.S. intolerably vulnerable to covert Soviet non-compliance, and could reduce the potential attractiveness of deception.

Footnotes

1. See, for example, T. K. Jones and W. Scott Thompson, "Central War and Civil Defense," Orbis, Vol.22, No.3 (Fall 1978), pp. 681-713; and T. K. Jones, "Civil Defense," in William R. Van Cleave and W. Scott Thompson, eds., Strategic Options for the Early Eighties: What Can be Done? (New York: National Strategy Information Center, 1979), pp. 109-15.

2. See Colin S. Gray, "A New Debate on Ballistic Missile Defence," Survival, Vol. XXIII, No. 2 (March/April 1981), pp. 60-71.

3. See the recent Congressional testimony by William Perry reprinted in Soviet Aerospace, Vol.27, No.11 (March 17, 1980), p. 87.

4. See Harold Brown, Department of Defense Annual Report, Fiscal Year 1981, (Washington, D.C.: USGPO, January 29, 1980), pp. 92-95; and Stephen Hammer, "NATO's Long-Range Theatre Nuclear Forces: Modernization in Parallel with Arms Control," NATO Review, Vol.28, No.1 (February 1980), p. 1.

5. Pierre Gallois, "Western Europe: An Improper System of Defence," RUSI Journal. Vol.124, No.3 (September 1979), p. 14.

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34. For a discussion of the verification problems involving the SS-20, see Lothar Ruehl, "The 'Grey Area' Problem," in Bertram, ed., p. 30.

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39. That the Soviet Union might be interested in surge-deployment of a weapon system is evidenced by their current BMD effort. As William Perry observes, "The Soviet BMD effort includes a program of performance improvements for their large phased-array detection and tracking radars, with development of a rapidly deployable ABM system which includes a new interceptor" (Emphasis added). See Soviet Aerospace, p. 87.

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